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ORIGINAL COMMUNICATIONS.

CASES OF VESICO-VAGINAL FISTULA.

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Case 1st.—Vesico-Vaginal Fistula—Following Protracted Labor—Spontaneous recovery.

Mrs. H., aged about 33 years, of large frame and strong muscular development, had about three years previously given birth to a still-born child, after a tedious labor. Was taken with labor pains about 2 o'clock A. M. Saturday, and by direction of the midwife in attendance, she exerted herself to the utmost, from the first pains, to increase, by voluntary efforts, the efficiency of the uterine contractions, till Monday evening following, when from physical exhaustion the progress of labor was suspended.

At this time, by a vaginal examination, I found the os uteri dilated; the head engaged in the superior strait, in the first position; the vagina hot, dry and tender; the urine had not been voided for many hours The distended bladder was relieved by the catheter. The forceps were applied without great difficulty, and after a little while the child was delivered still-born.

At first the only unfavorable symptom was a partial paralysis of motion and sensation in the right inferior extremity. The bladder was evacuated by the catheter, and the bowels moved with Ol. Ricini on the second day. The lochia continued in the usual quantity, but offensive.

On the 8th day after delivery the patient complained of inability to retain her urine, and an examination, made by passing a silver catheter into the bladder and a finger into the vagina, revealed a fistula nearly the size of a ten cent piece, opening into the bladder at the upper end of the trigone.

Treatment.—The bowels were kept soluble by the use of saline laxatives. The catheter was allowed to remain in the bladder a considerable portion of the time. The vagina was syringed frequently with tepid water. Electro-magnetism and stimulating frictions were applied to the paralysed limb. After about two weeks the fistula appeared to have contracted sensibly; sensation and power began to return in the limb; and in about six weeks more the urine passed only by the urethra, and the patient was enabled to walk without assistance. The improvement in the limb continued until the patient perfectly recovered.

The result in this case impressed me most forcibly with the importance of assiduous attention, in recent cases of accidents of this kind, and of the probability of recovery by the constant use of a properly constructed catheter, and frequent use of vaginal and vesical injections of water, or with the addition of some suitable astringent.

Case 2nd.—Mrs. A., from an adjoining State, the mother of two children—the youngest about seven years of age—arrived in this city Sept. 20th.

The history of her case, as obtained from herself, was, briefly: That about five weeks previously she was taken in labor; that after suffering about seven days under the care of her physician, who had administered ergot freely, she secured the services of another physician, who delivered her, with instruments, of a large still-born child. A few days after her

delivery, she experienced inability to retain her urine, which flowed continuously. The physician last in attendance examined and found a vesico-vaginal fistula, situated high up in the vagina; and by his advice the patient visited this city to obtain relief.

Having evacuated the bowels freely with Ol. Ricini on Sunday, I performed the operation Monday A. M., assisted by Profs. Brainard and Ingals, Drs. Lynn and Gore, and Mr. G. B. Cloud, medical student. The patient was placed in the prone position, leaning over the edge of a table, the hips elevated above the shoulders by pillows properly placed, and chloroform administered. The edges of the fistula were then carefully dissected so as to denude the entire thickness from the vaginal to the vesical mucous membrane. Three stitches of silver wire were then introduced, with the precaution of not including any portion of the vesical mucous membrane. No little difficulty was experienced in passing the needles through the upper border, for the fistula encroached very closely upon the neck of the uterus. The shield was then brought into requisition, it having been previously prepared from thin sheet lead, of a size somewhat larger than the fistula and oval in shape, measuring about 1¼ inches by ¾ of an inch, and perforated with six small holes, about ¼ of an inch apart, and arranged in two rows, separated about 1-16 of an inch. The wires were then passed through these holes while the plate was still external to the vulva. The plate was then carried up to the fistula and sufficient traction made to bring the edges together. The wires were then twisted close to the shield and cut off. A catheter was introduced into the bladder, the patient placed on her back in bed, and 2 grs. of Pulv. Opium administered. This was repeated three times in the succeeding thirty-six hours. The diet consisted principally of nutritious broths and beef tea. The vagina and bladder were washed by daily injections of cool water. Very little pain or irritation of any kind followed the operation. The bowels were not evacuated until the eighth day.

On the 9th day the stitches were taken out and the shield removed. The fistula was completely closed. The catheter was retained in the bladder several days longer, and the patient remained about a week after discontinuing the use of the instrument, and then returned to her home perfectly well.

Case 3rd. Still under treatment.—Mrs. C. was delivered of her first child about six months since. After suffering in labor more than a week, instruments were used, and the child was still-born. By her account the fistula existed from the time of delivery, for she represents that she was unable to control the escape of urine thereafter.

The operation, which I performed one week since, did not differ in any essential particular from that described in the second case. No unfavorable symptom has occurred. The shield has not yet been removed, but, from appearances, the case promises to terminate favorably.

RUPTURE OF THE UTERUS—CÆSAREAN OPERATION—DEATH IN SEVEN DAYS.

Reported by L. R. HOLMEAD, M. D., Chicago.

Was called upon by Mr. B., Sunday, July 20, at 11 A. M., to see his wife in labor with her fifth child. On my arrival, found that she had been having pains since early in the evening previous. A midwife was in attendance. The pains said to have been slight until 3 A. M., when they became quite severe, and so continued until 9 A. M., when they ceased suddenly, the patient exclaiming, "What was that gave way?" and complaining of great distress in the abdomen.

All her former labors had been severe and prolonged. Upon examination, found the following condition: Pulse, 85 and full; nausea and retching, but no vomiting; no labor pains, but continued abdominal distress; head of child resting

on floor of perineum. In fifteen or twenty minutes after my arrival, the pulse began to flag and vomiting commenced, but the latter was readily allayed by Opium. Fearing the nature of the trouble, I requested counsel, which, after some opposition on the part of the family, was acceded to. My friend, Dr. David Dodge, arrived at 12 M., and he agreeing with me, the family requested the further counsel of Dr. N. S. Davis, who came in at 2 P. M. He agreed with us in the propriety of instant removal of the child, although not decided as to nature of the trouble. The patient's pulse 120, and the head had receded slightly. Prof. Davis attempted to apply the forceps, but the child immediately receded. Upon examination it was found to have passed through the rupture, except the head and one arm. He then attempted to turn, but could not introduce his hand through the opening. Prof. Byford was then sent for, with request that he should come prepared to perform the Cæsarean operation. 4 P. M.—Patient growing more feeble; pulse 140.

4:30.—Prof. B. arrived. The Cæsarean operation decided upon and performed by him. Placenta and child both found in the peritoneal cavity; removed and wound closed in the usual manner with needles. 5:30.—Gave ½ gr. Sulph. Morph. and directed ¼ gr. to be repeated every hour during the night. 7:30 P. M.—Quiet, and seems to be getting under the influence of the narcotic. 8 o'clock.—Prof. B. called; pulse 130, weak. 10:30.—Sleeping; pulse same; skin moist.

21st, 2 P. M.—Continues in about same condition. Commenced giving Brandy ℥ ss every hour. 4 A. M.—About the same. 6 A. M.—Begins to be narcotized; pulse and skin in same condition. 8 A. M.—Prof. B. called; pulse rather more full; otherwise no change; brandy suspended. 12 M.—Abdominal muscles begin to relax; abdomen slightly tympanitic. 2 P. M.—Prof. B. again present; pulse more frequent; tympanitis increasing; feels weaker. Morphine continued. Tr. Veratrum Viride gtt iv.

6 P. M.—Apparently sinkiug; pulsc 150; very weak. Exhihited Morph. Sulph. and two drops Verat. Virid.

7 P. M.—Seems to be sinking rapidly. 8 P. M.—If any change, slight improvement. Prof. B. again present; ordered Turpentine gtt. iv., with Tinct. Opi gtt. x. in emulsion, every hour.

10 P. M.—Pulse getting more volume. 12.—Continued improvement. Comes out from under influence of opiates. Pulse 130, full. Complains of tenderness in the abdomen.

July 22nd.—Continued apparent improvement when examined at 2, 4 and 6 A. M. At 8 o'clock, Drs. Byford and Dodge came in; condition good; pulse 112. At 2 P. M., begins to give way again; nausea; pulse 130, and weaker. Discontinued Turpentine on account of the nausea; Morphine and Verat. Virid. continued. 8 P. M.—Had been rather more comfortable during the afternoon. At 11 P. M., tympanites began to diminish.

July 23d.—Has passed considerable gas with relief. The wound looks healthier this morning and traces of pus.

2 P. M.—Passed the morning comfortably; pulse not quite so good; tympaniets increasing. Ordered Quinine 3 grs. every four hours. Attempt to pass a rectum tube, but it will not go by the uterus. When removed, the orifice was found clogged with fæces. 6 P. M.—Considerable company has been permitted by the family. Patient is restless; tympanits increasing. Morph. gr. ss.

12 M.—Great excitement. Pulse 150, pretty full; abdomen enormously distended. Drs. Dodge and Byford present. Ordered injection Warm Water ℥ vj; Castor Oil ʒ ij; Turpertine ʒ j. M. Which moves off a large amount of gas, but no fæcal matter. This gave much relief, and the pulse lessened in frequency.

July 24th, 8 A. M.—Tympanites subsiding; has passed gas freely. Essence of beef ℥ ss, every two hours.

2 P. M.—Pulse 130; wound looking well. 8 P. M.—Has been sleeping quietly; tympanitis less.

July 25th.—Afterpains when the wound is dressed. 12 M. Spontaneous and free movement of the bowels; pulse somewhat excited. 2 P. M.—Pulse 130; no sleep. 8.—Symptoms of suppuration. Essence of beef ℥j, every two hours. No further movement of the bowels. After-pains becoming regular; discharged one clot; lochia free; no sleep. *Left parotid somewhat tumefied.*

July 26th, 8 A. M.—Not as well; had a bad night; the bowels had moved once; pulse 140. Swelling of the left parotid region increasing. Ordered: ℞. Comp. Tinct. Cinchonæ ℥j; Quiniæ Sulph. gr. j; Acid. Sulph. Aromat. gtt. v. M. To be given every two hours. Needles removed from the wound, which is looking badly. Adhesive plaster substituted.

2 P. M.—Worse. Diarrhœa. Ordered Tinct. Opi ℥j at once, and ℥ss every two hours; Tinct. Cantharides gtt. xl; but, on account of the difficulty of swallowing, the patient did not take it until four o'clock. 6 P. M.—Pulse fuller, 130; can swallow more readily. 10 P. M.—Pulse failing; parotid increasing in size; painted it with Tinct. Iodini; bowels still moving too freely, and wound looks badly.

July 27th, 8 A. M.—More feeble; diarrhœa continues. Continue treatment.

10 A. M.—No pulse at the wrist; cold to the elbows. Brandy *ad lib.* 11 o'clock.—Pulse returns; hands warm. 12 as at 11. 2½ P. M.—Sinking. At 6 P. M., in my absence, she was seized with convulsions. Drs. Byford and Dodge exhibit Chloroform, with relief. From this time she sunk rapidly. At 8, the spasms recurred; Chloroform produces vomiting, and death occurred at 9 o'clock P. M., being over seven days from the operation.

The single but pregnant comment upon this case is that, although it ultimately resulted fatally, nevertheless it contains within itself ample evidence that the formidable operation involved is warranted as a dernier resort in instances of this terrible accident.

REMARKABLE CASE OF RETENTION OF THE PLACENTA.

By J. DRAKE HARPER, M. D., Springfield, Ills.

Mrs. B. gave birth to a fœtus of four months, on the 4th inst., late in the evening. I was sent for to remove the Placenta. On arriving, I found the cord had been ruptured within the os uteri, by a lady who was in attendance. I found the patient comfortable; no flooding; no after pains; pulse regular. On making an examination per vaginam I found the mouth of the womb almost entirely closed—not able to introduce the end of the index finger.

I gave her wine of Ergot, one drachm every half hour for six or eight hours. At the same time, directed warm water injections per the rectum and vagina, and cloths dipped in hot water to be applied over the hypogastric region.

On the morning of the 5th I called to see her. The remedies having effected nothing, I ordered a hip bath and a large dose of Castor Oil. After the oil had been taken a few hours I directed injections to be used again.

The evening of the same day I called again, finding my patient comfortable, oil having operated thoroughly; no flooding; no after pains; skin moist; pulse soft and regular. I made an examination per vaginam; the condition of the womb the same as at the former examination. The discharge from the vagina was of a sanious, watery nature, entirely void of smell.

That night I gave her three portions of Pulv. Doveri and small portions of Morphine, and Flax Seed Tea, to be used several times through the night.

On visiting my patient the following morning, she stated that she had had quite a good night's rest, perspired freely, and expressed herself as feeling able to get up and go to work.

This morning the indications were to let nature do its work, directing the use of Pennyroyal and Flax Seed tea occasionally through the day, and the use of warm water and milk injections, per vaginam, twice a day.

Believing "Conservative Medicine" to be safer than a "Meddlesome Midwife" in such cases, I directed the use of warm teas, and injections to be continued. I visited her regularly every day, until the evening of the tenth day after abortion. This evening I found her not so well; considerable fever; pulse 90; bowels same; tympanitis; slight tenderness over the region of the womb. Made an examination per vaginam. The mouth of the womb was still contracted, and hotter than natural, producing some pain in raising the womb upon the tip of the finger. Seeing interference became absolutely necessary to save my patient, I directed the use of a hip bath, injections to move the bowels, and hot fomentations to be applied over the abdomen. I also used a small quantity of Extract of Belladonna to the os tinceæ; and gave her—Doveri, grs. xxx; Sub. Mur. Hyd, grs. x; to be divided into four parts, one to be given every four hours, and Turpentine emulsion between the powders.

The next day at 12 o'clock M., I delivered the Placenta. She flooded a great deal before I arrived. Found the afterbirth hanging in the os uteri. On examination of the uterine surface of the Placenta it presented all the appearances of one recently expelled after the birth of a fœtus. There was no decomposition, hence there was no odor. The patient has entirely recovered.

A CASE.

By L. B. BROWN, M. D., Iroquois, Ills.

MESSRS. EDITORS OF THE CHICAGO MED. JOURNAL:

I was called in July, 1861, to see a lad about thirteen years old, with fractured *Clavicle*. The accident occurred some two

or three days previous to my visit, and had been treated by a "physician" living in town. The case, so far as the fracture alone was concerned, presented nothing unusual, but the manner in which it was dressed, and, particularly the operation to be performed by the attendant, (who was momentarily expected,) was astonishing to me as related by the mother of the patient.

The mountebank, after making use of all means known to him (except heroic) whereby fractures are to be adjusted, declared that it was necessary to make an incision through the skin, and introduce a hook in order to raise the rebellious portion of the clavicle. It was in consequence of this declaration of the quack that I was called.

After disengaging the patient from an almost inextricable application of compresses and bandages which were sewed at every accessible point, and seemed applied for the double purpose of *securing the patient* and keeping him warm, I applied the common figure of 8 bandage, with pad in the axilla, and sling. A cure was completed in five or six weeks without difficulty.

Question—Is it advisable to report such cases?

CLINICAL INSTRUCTION IN THE HOSPITAL OF VIENNA.

By E. L. HOLMES, M. D., of Chicago.

I intended to give a description of the Clinics in the Hospital at Vienna before leaving that city. I was unable to do this, and now take the first opportunity since my return to Chicago of fulfilling my promise.

Students from the United States, who visit the European Hospitals, are usually most interested in the clinical lectures, and probably such lectures are of more practical importance

than any others. I have stated some of the reasons why I consider the Clinical Instruction of Vienna to be superior to that of other cities for those students who wish to fit themselves for the practice of *general medicine and surgery*. Any one who intended to pursue a specialty would undoubtedly do well to visit the clinics of every large city. The same is also true of general medicine, when the student has ample means and sufficient time, with a knowledge of different languages. In other cities, celebrated for their clinical lectures, there are the following inconveniencies, which I have learned by my own experience and that of others: The clinics in all the hospitals and in the wards of the same hospital are given at the same hour of the day—usually between eight o'clock and ten in the morning. Little effort seems to me to be made to give the student full advantage of the valuable material collected in these hospitals. This is too much the case in many of our American hospitals. It is difficult to see why, in large cities with fine hospitals, the clinics of each hospital and of each ward should not be given, as far as possible, at different hours of the day, that the student may have the opportunity of hearing as many clinical lectures as he may desire.

In this regard the Vienna hospital is far superior. Early in the morning are two clinics in general medicine, followed by those of surgery. After these, at separate hours, are the lectures at the bed side on diseases of the eye, skin, syphilis, obstetrics, and in the "dead house" on pathology.

In addition to the public clinics, the student finds every facility for taking private instruction in the diagnosis, treatment and pathology of the diseases of nearly every organ in the system. In this way the student is enabled to gain the greatest amount of practical knowledge in the shortest time. The lectures themselves compare very favorably with those of any hospital in the world.

One of the most populhr clinical lecturers in Vienna is Prof. Oppolzer. One can scarcely conceive a more practical plan of imparting medical knowledge than that adopted by

this distinguished lecturer. Gifted with great fluency of speech and possessing a wonderful degree of erudition in everything pertaining to the past and present history of medical literature, united with an immense experience in the observation and treatment of disease and in public instruction, he is able to make his lectures interesting and of the greatest good to his listeners. Not only students, but old practitioners testify by their continued presence to the great merit of these lectures.

Every patient, as soon as he enters the wards of the lecturer, is assigned to the care of a student, whose duty it is to make a careful examination of the symptoms and keep a record of the case as long as it remains in the hospital; at the clinic the professor questions the student in presence of the class in everything pertaining to the case, calling the attention of all to every important point and comparing it with other similar cases in the ward. At the same time the secretions are carefully examined by means of the microscope and test tube.

The clinics are usually about an hour and a half long and are given six days in the week.

The clinics of Prof. Scoda are also worthy of notice. Although he is much less fluent and generally considered less interesting in his manner than Prof. Oppolzer, his lectures are none the less instructive. They are principally upon diseases of the chest. There are a sufficient number of patients and ample opportunity for every student to examine each patient for himself. Private courses of instruction in auscultation and percussion are given by Professor Scoda's assistant.

These clinics are followed by those of Professors Schuh and Dumreicher in the surgical wards. The general plan of instruction is the same as above described. Everything relating to operations, to the diagnosis and treatment of injuries and surgical diseases is carefully taught, with cases enough to illustrate every important point. I should infer, after con-

siderable observation, that injuries requiring surgical treatment, especially fractures, were rare in Vienna as compared with our own large cities.

The clinical lectures in obstetrics are particularly important to the American student, who has little opportunity of receiving clinical instruction in this branch of his profession in America.

There are upon the average, I think, eight births a day in the hospital. The patients are delivered in a room assigned for the purpose, and then carried to the wards, where they remain nine days, or until they are able to leave. The class is carefully instructed in the mode of making examinations per vaginam, and of learning the position of the fœtal head and body during labor. The whole process of parturition is thus learned by repeated observation. There are also private courses on the use of instruments and "turning," the cadaver, from which the viscera have been removed, serving the purpose of a manikin. A dead fœtus is placed in different positions in the pelvis, which the students are to examine in turn and give their diagnosis. After this the operation of turning or the application of forceps is made and the fœtus delivered. When the student has taken this course on the application of instruments, he is permitted to use them when necessary on the living subject in the lying-in wards. One thus has an opportunity of watching several hundred cases of labor, of having a small number under his own care and of learning practically the use of instruments; he is also taught the duties of the lying-in room in reference to the mother and infant during the nine days subsequent to delivery.

The clinics of Prof. Hebra on diseases of the skin are one of the most popular courses in the hospital. In his wards are nearly two hundred and fifty patients, and with this large number of cases he is able to illustrate all the important points in the commencement and progress of every form of skin disease. The wards are open to the students, but Prof. Hebra usually delivers his lectures in a small amphitheatre,

the patients being brought before the class. After he has called the attention of the class to the points worthy of notice in each case, the patient passes from one patient to another, thus enabling each to examine him more closely. The male patients are wholly naked at the clinics; the females being dressed in loose garments, to permit a ready examination of any part of the body. These clinics are given five days in the week.

The lectures of Prof. Sigmund on syphilis are very popular. There are two or three hundred cases in his wards. A careful examination of these, in connection with the lectures of the Professor, will make the student more familiar with this disease than he can be after years of reading and observation in private practice.

Students interested in diseases of the eye will find the clinics of Professors Arlt and Jaeger interesting and instructive. In these wards are about two hundred patients. The student has ample opportunity of acquiring a knowledge of the use of the ophthalmoscope, of witnessing a large number of operations and of acquiring skill in the diagnosis of opthalmic disease.

In addition to the ordinary clinics as above described there are private courses of instruction in the clinical study of every class of disease, including treatment, operative and medical. These courses are scarcely less beneficial to the student than the others, as they give him an opportunity of reviewing what he has alreany learned from the different Professors.

I cannot close this short notice of the Clinics of Vienna without alluding to the facilities given the student for the study of pathology. There are upon the average five post-mortem examinations a day, at which students can be present, notice always being given when a patient dies, of the hour when the autopsy will be made. Generally, however, the students prefer to be present at the lectures of Prof. Rokitansky, at which all the morbid specimens of diseased organsf collected each day, are exhibited. The private course o

Rokitansky's assistant is very useful, since he not only demonstrates all the fresh specimens, but visits the great Pathological Museum, for which Rokitansky has so long labored, and explains all the preparations, illustrating the effects of the disease of each organ.

The Pathological Museum may justly be regarded with pride by the Medical School of Vienna. The building is a large fire-proof structure of stone and brick, erected at a cost, as I was informed, of $40,000. The Museum is a large hall, tastefully fitted and ornamented. The other portions of the building are used for the reception of the dead previous to burial, for dissections, for the ordinary post-mortem examination of the hospital, and for the examination of cases of sudden or violent death in the city. Each Professor has a private room for the examination of his own cases. Whatever may be said of the advantages offered by other cities for the study of surgery or medicine, I think no city can claim for its hospitals better facilities for the study of pathology than can be found in Vienna.

I trust I have been understood in what I have said regarding the superiority of the Medical School of Vienna. I have given my reasons based not only on my own experience, but especially on that of many other medical men from nearly every country of the world who have visited every large city of Europe.

SELECTED.

DIPHTHERIA.

EXTRACT PROCEEDINGS PHILADELPHIA COUNTY MEDICAL SOCIETY.

Jas. M. Corse, M. D., Chairman Com.

During the past year this disease has prevailed amongst us, and has, in quite a number of instances, proved fatal in spite of the medical means employed for its cure. In many of its features it closely resembles other diseases, while a few of its symptoms and its sometimes intractable character, have distinguished it from them and placed it in the light of a new disease. Its protean character has given rise to difference of opinion in medical circles, as to whether it is a variety or complication of known diseases, or an entirely new scourge. In the present state of learning, we are unable to determinately settle the question, and must prescribe for it according to the phenomena observed in each case.

History shows us that long since, even as far back as 1576, a disease of a fatal character was noticed, which was characterized by many of the symptoms of diphtheria, and later writers are willing to consider it the same as the one which now prevails so extensively.

Dr. Wittig writes he "has met with a number of cases of diphtheria, of which only two were fatal; a false membrane was formed like that in croup, which passed down into the larynx; the febrile symptoms were milder, but the suffering greater than in croup.

"The disease occurred sometimes in conjunction with scarlatina and sometimes independently. I did not employ blisters because I have known them in croup to produce a slough. Aq. chlorinata; tr. ferri chlor. and nit. arg. and sulph. cupri were applied to the fauces.

"In one of my fatal cases the urgent symptoms subsided a few hours before death, and the patient became conscious; notwithstanding I gave wine whey, beef tea, and quinine, the patient continued to sink, and at last expired."

Dr. Atkinson says diphtheria has in common with scarlatina every premonitory symptom; when fully developed, everything except the rash, and leaves precisely similar sequelæ,

and finally, that "it would require stronger arguments and more observation of well-marked cases to convince him that these two names do not rightfully belong to one affection." Dr. Maris, Resident Physisian to the Philadelphia Dispensary, says of diphtheria, "I am disposed to believe it may be induced by the poison of scarlatina, but that the diseases are identical I am not convinced. My plan of treatment consisted in the use of chlorate of potash, tr. ferri chlor., wine whey, beef tea, &c.; locally, gargle of dilute chlorinated soda, cupri, alum, &c."

Dr. Hamilton writes of diphtheria that "the symptoms are in some cases so similar to what we see in some cases of scarlatina and in croup, as lead to confusion and difficulty in diagnosis. Other cases were so decided and peculiar in feature, as to admit little doubt of their non-identity with scarlatina or croup."

Dr. Henry Hartshorne says: "My conviction of the non-identity of diphtheria with scarlatina, and of the pathological importance of the diagnosis between it and croup, has been strengthened by every case I have seen.

"This disease is one of the greatest importance in all respects, but more particularly from its extensive prevalence and fatality."

In reply to our circular, Dr. Condie has given a concise summary, which contains most of what may be said on the subject, and coming from one of his ripe experience and happy power of description, we deem it best to give his remarks on the subject entire.

Dr. Condie reports that, "compared with 1859, the past year, 1860, may, with propriety, be pronounced as a decidedly unhealthy one, throughout nearly every portion of the United States. It has been marked, certainly by the prevalence of more and severer disease, and a far greater amount of mortality than the year preceding.

"Various forms of catarrhal, bronchial and pneumonic diseases, were constantly met with during the spring, as well as during the latter portion of the summer, and from then throughout the autumn and winter up to the present time.

"During a portion of the year measles, chicken-pox, and a very malignant form of scarlatina prevailed, in different sections of the city, as somewhat extended epidemics. In certain neighborhoods a large number of cases of erysipelas and small-pox, with some of hooping cough, and many of child-bed fever. To this list of prevailing diseases must be added

pseudo-membraneous angina or diphtheria. All of these still continue to show themselves to a greater or less extent, in many portions of the city.

"From the very commencement of 1859, diseases of the fauces and of the respiratory organs, varying much in intensity, were observed to occur more frequently than during preceding years. More especially was this the case in respect to inflammatory affections of the throat in persons of ages and conditions in life. Most of the cases which first occurred, were of simple sore throat—slight redness (with very little or no tumefaction) of the tonsils, of the palate, uvula, and often of the whole posterior portion of the pharynx, without, however, any diphtheric deposition, or ulceration. There was usually a sense of heat and dryness of the throat, some increase of soreness in swallowing, and a short, hacking, but not very frequent cough. These cases were attended with more or less, but never very intense or long continued, constitutional disturbance. They readily yielded to a very simple treatment, and seldom lasted beyond two or three days.

"Towards the close of spring, and during the damp and changeable weather of the summer, many cases were seen in which the affection of tonsils, palate and pharynx; greater intumescence of the mucous membrane—some difficulty in swallowing, and with the appearance, for the most part, upon the tonsils, and posterior and upper portion of the pharynx of very small patches of a dirty white, yellowish, or brownish exudation, very nearly circular in form, and with tolerably sharp and well defined edges. Sometimes the congested mucous membrane rising up around these patches, would give them the appearance of being depressed, as though the deposit was the bottom of a small ulcer. These cases were, like the former, in general, readily controlled, and usually terminated favorably at the end of four or five days, or at the furthest a week.

"Cases of genuine well-warked diphtheria became now extremely common in some sections of the city. The disease, however, as it presented itself in different patients, varied much in the intensity of the symptoms. In the simplest and mildest form it commenced without any very marked symptoms. The patient would occasionally complain of a sense of soreness, or of prickling about the fauces, with a slight degree of pain, extending along the Eustachian tube into the ear—some stiffness about the neck—dryness of the throat, a slight, dry cough, and more or less thirst. The tonsils were gener-

ally swollen, while the entire mucous membrane of the fauces was reddened, exhibiting considerable injection of its superficial vessels; the surface, at the same time, being uniformly copered with a thin, transparent, shining pellicle. The latter occasionally increased soon in density, so as to become opaque and acquire a whitish or yellowish hue. When this pellicle was detached the mucous membrane beneath was found to be without ulceration or abrasion. The tongue, particularly from about its centre towards its base, was more or less thickly indued with a dirty-white granular looking fur. By the fauces there was secreted a thick, tenacious, ropy fluid, not readily ejected from the mouth.

"This form of the disease was attended with but little danger, and seldom lasted, if it were properly managed, beyond a few days. Three-fourths of the cases seen by me were entirely well at the end of six or eight days. Occasionally, however, the case would suddenly assume, usually in its early stage, a much more severe and dangerous aspect—even acquiring, within a very short period, the most malignant features of the disease.

"In other cases, again, the attack was preceded for several days by a sense of languor and lassitude. Chills and flushes of heat would rapidly succeed each other. There would soon set in pain of the head, redness and suffusion of the eyes, stiffness and soreness of the neck, with intumescence and tenderness of the cervical glands. Pains extending into one or other of both ears, or frequently down the back and along the lower extremities were of common occurrence. There was always some difficulty of deglutition, which in severe cases was often so great as to cause, when an attempt was made to swallow fluids, a portion of these to be returned through the nose. The surface was hot and dry, the urine scanty and high-colored; often turbid and ropy. The bowels were mostly regular—though occasionally constipated. The appetite in some cases was entirely absent, while in others it was variable, or but slightly affected. Occasionally there was pain of the epigastrium, with nausea and vomiting, at intervals, of a glairy fluid tinged with bile; now and then every minute albuminated flocculi were seen floating in it.

"In some cases the attack was ushered in with a decided chill, succeeded by severe fever, which lasted usually about forty-eight hours, but, in many instances, it continued throughout the disease. For the most part, however, the febrile action was but slight. It was always more or less decidedly remit-

tent, and often assumed from the onset a stronly marked adynamic type. In this more evidently febrile form of diphtheria, the throat, very early in the attack, became hot and sore. Deglutition, and, indeed, every movement of the muscles of the throat was attended with pain. The tongue was narrow and pointed, and thickly coated with a dirty white or yellowish pasty matter, through which the enlarged papilla were seen to protrude, in the form of red, shining points. The deposition upon the faucial mucous membrane was from an early period of the attack abundant and of a membraneous appearance.

"Its color was dirty white, yellowish or grayish. It usually commenced in small, distinct patches, which rapidly extended in size, and finally coalesced, so that soon the throat presented scarcely a single portion which was not uniformly coated. Sometimes the deposition took place simultaneously over nearly the whole of the throat. When it was separated from the faucial mucous membrane, the latter was found intact—or slightly reddened: occasionally, there was seen to ooze from its surface a blood serum, or even a drop or two of pure blood.

"In the great majority, if not in all the cases observed by me, the deposit in the throat was repeatedly thrown off and again renewed. In favorable cases it became thinner upon each renewal, until it ceased entirely to be formed.

"Even when the membraniform deposit was confined strictly to the tonsils, the palate or the pharynx, there was often observed some change in the tone, volume, and clearness of the patient's voice. There was, however, very little, if any, disturbance of respiration, so long as the deposit did not extend into the larynx. When, however, such extension occurred, the breathing became invariably difficult and stridulous, and there set in a loud ringing cough, as in croup; while the voice became low, whispering, or extinct.

"In a few cases there took place, even before any symptoms of severe illness became manifest, a rapid and most extensive deposit throughout every portion of the fauces, pharynx, and larynx, followed promptly by death from suffocation, as in the more acute form of membranous croup.

"In its more severe forms, the disease was apt to linger for ten or fifteen days, or even longer, with occasional changes, apparently for the better, but of short duration, the patient gradually sinking into a state of hopeless exhaustion. An attack of bronchitis of the most unmanageable form would

not unfrequently occur, sometimes early in the attack. Pneumonia has, also, been observed, running a rapidly fatal course. It has happened, now and then, that after apparently the most complete convalescence had set in, a relapse would most unexpectedly ensue, followed shortly by a fatal termination. Even in severe cases of diphtheria—under what seemed at first sight the most unpromising circumstances—the disease after running a more protracted course—fluctuating for many days between better and worse—has been known eventually, under judicious management, to terminate favorably.

"Diphtheria assumed occasionally a form of very decided malignancy. The attack commenced in one or other of the manners above recited. Very early, however, indications of adynamia, of a more or less decided character, made their appearance. The strength of the patient became greatly depressed—there was a livid, dusky appearance of the countenance, and an acrid heat with great dryness of the surface. The entire throat presented, from the first, a thick coating of pultaceous, ash colored matter, which soon became of a dark brownish, and, finally, decidedly black hue, and exhaled a gangrenous odor. A fetid sanious fluid, of more or less consistence, was discharged from the nostrils. The cervical glands became greatly swollen, and often the whole of the anterior portion of the throat also, the integuments of which became tense and shining, and of a dusky red or mahogany color. In such cases, I have known suppuration to ensue, the matter being infiltrated throughout the cellular tissue of the parts affected, causing extensive sloughing, laying bare in a few instances the parotid glands, the trachea, and the large bloodvessels of the neck. The disease has been seen to extend from the throat in the posterior nares, involving in destruction all the soft parts from the roof of the pharynx, including the soft palate, to the base of the brain. In this malignant form of diphtheria the prognosis is always unfavorable—recovery from it being rather the exception than the rule.

"In all the forms of the disease an eruption upon the skin is liable to occur. It has been supposed to be confined chiefly to the more intense grades of the disease; I have observed it, however, as often in the mildest cases as in the most malignant. The eruption is sometimes slight and evanescent, but occasionally it is more generally diffused—of a more decided appearance, and continuing for several days. In these cases the eruption bears a close resemblance to that of measles—

inclinig to a very deep raspberry hue. In some instances, it was, however, the appearance simply of a slight efflorescence or scarlet rash—whenever this is the case we have found it to be very evanescent—or to come and go at short intervals throughout the entire continuance of the disease. This eruption cannot be said to be a very common accompaniment of diphtheria. In some of the epidemics of which we have the history, no mention is made of any eruption upon the skin having been observed; while in others it is described as constituting one of the prominent features of the disease. It is probable, however, that in many of these cases there was a combination of diphtheria with scarlet fever—both of which diseases have very generally prevailed in the same localities at one and the same time. This fact has been noticed in this country as well as in Europe.

"As sequelæ of diphtheria, I have observed abscess of the tonsils, parotids, and other glands of the throat and neck. Inflammation of one or both ears, followed by suppuration and a long-continued fetid discharge; a similar discharge from the nostrils is also liable to follow attacks of diphtheria. The discharge from the nose as well as that from the ear very generally caused a severe irritation of the parts over which it was allowed to flow. In some instances the attack of diphtheria was followed by a short, dry, obstinate, hacking cough—hoarseness—with loss of the natural tone and compass of voice—in a few cases with a total extinction of the voice. In other cases the sequelæ were chronic diarrhœa, intumescence of the face and extremities, sometimes of the entire body. In nearly every severe case convalescence was long and tedious, and the patient was liable throughout it to the occurrence of severe attacks of bronchitis or pneumonia, or even to die suddenly, after any unusual exertion, apparently, from mere exhaustion.

"Albuminuria was by no means a common occurrence in the cases of diphtheria, which have fallen under our notice, certainly in not more than one fourth. When it did occur, it made its appearance early in the attack. Its presence or absence did not appear to bear any relation to the severity or mildness of the attack, or to render the prognosis more unfavorable. The albuminous urine, even when most marked and profuse, would occasionally be found entirely free from tubal casts. Unlike what occurs in scarlatina, albumen has very seldom been detected in the urine during convalescence, never, unless it had been previously present.

"In by far the larger number of instances, which have fallen under my observation, the persons attacked with diphtheria were infants, and children under fifteen years of age. Occasionally, however, the disease was encountered in older patients—chiefly, within the range of my observation, females. The youngest patient with diphtheria treated by me was turned of two years—the oldest, a female, forty years of age.

"Diphtheria is evidently the product of some peculiar morbific condition of atmosphere, either confined to certain limited districts or, as usually takes place, spreading successively from district to district. Notwithstanding its epidemic features—its general disregard of the topographical character and the sanitary condition of the places visited by it—of the character and amount of their populations, or the season of the year, diphtheria has nevertheless been found to prevail most extensively, and with the greatest severity in low, damp, confined, unventilated, and otherwise unhealthy situations; during seasons marked by great and sudden vicissitudes of temperature, in conjunction with excessive atmospheric moisture, and among a crowded, squalid, badly-fed population, the members of which are regardless of personal and domestic cleanliness. I have not met with a single fact that would lead me to suspect that diphtheria is susceptible of being propagated by contagion. Whenever I have been able to investigate properly the circumstances which have been adduced in evidence of the contagious character of the disease, I have invariably found them to be simply cases in which the diphtheria has successively made its appearance in individuals who had visited or who were residents of a location in which it was at the time prevailing, and who, in consequence, were equally exposed to the same malaria, the same epidemic cause by which the disease was generated in those previously attacked, and from whom it was supposed to be contracted by those who sickened subsequently. In all these instances it was most certain that in those who took the disease it was generated by a common atmospheric cause, which, we admit, was more active in certain localities than in others within the sphere of the epidemic influence, from the want of due ventilation, overcrowding and other unfavorable hygienic condi tions.

"As to the true pathological character of diphtheria: the common opinion formerly entertained that it is a specific inflammation of the mucous membrane of the throat, giving rise to a peculiar pellicular exudation upon the surface of the

affected membrane without destruction of its integrity, will scarcely find any supporters at the present day. The entire history of the disease, its symptoms, progress and results, would seem to indicate its evident dependence upon some morbid condition of the general system—most probably arising from some abnormal condition of the blood. This view of its pathology seems to me to constitute the only true and safe basis for a rational and successful therapeutics. Whoever shall attempt the treatmeut of diphtheria, in its more severe forms at least, by remedies directed solely to the throat affection, will meet certainly with disappointment—a judicious and well managed constitutional treatment will alone be crowned with success. The efforts of the physician must be directed mainly to the restoration of the healthy condition of the blood—not, however, overlooking entirely the diseased condition of the throat. The removal of the membraniform deposit from the fauces, or the prevention of its accumulation and extension is always to be attended to. It is a measure calculated to give great relief to the patient, and will concur with the general treatment in rendering his recovery more prompt and certain.

"By some few writers on the disease diphtheria is set down as a mere form of scarlatina, unattended, for the most part, by the eruption on the surface. It is very certain that there is a very close affinity existing between diphtheria and scarlet fever, and, also, we believe it will be found, between it and epidemic erysipelas. All three of these diseases are liable to prevail together epidemically, in the same localities. They are all zymoses—their local and more prominent symptoms being all subordinate and secondary to a general morbid condition of the system. It is well known that diphtheritic deposition often occur in the throats of patients affected with scarlet fever, and we have seen that an eruption upon the skin is at least an occasional occurrence in connection with diphtheria; it is this, perhaps, which has led to the opinion that there is a perfect identity between the two diseases. We are convinced, however, that their diagnosis can always be very readily made out.

"During the past year, up to the present period, during the epidemic prevalence of diphtheria, the same thing has been observed as was observed in most—nearly all—of the former epidemics of the disease, that, namely, in conjunction with it, both scarlatina and erysipelas prevailed in the same neighborhoods, often in the same house. Cases of erysipelas, especial-

ly, have certainly fallen under our notice during the last eighteen months, more frequently and of a more severe and unmanageable character, than during the same length of time at any former period of our practice.

"In the treatment of the disease, so far at least as it fell under my notice, in the cases met with by me, I have been governed solely by the indications present in each case. In a few instances, where the disease occurred in young, robust, and plethoric habits, and was attended by decided febrile reaction and a hard or resisting, quick pulse, I have directed at the very onset of the attack, a moderate abstraction of blood by leeches applied to the neck in the neighborhood of the tonsils, and I am persuaded, with the very best results. In the majority of cases, however, direct depletion was strongly contra-indicated, and a tonic, cordial, and stimulant treatment demanded. My usual remedies were the tinct. of the muriate of iron, quinine, wine whey, milk punch, or even pure wine, or brandy and water, in doses, the size and repetition of which being adapted to the age of the patient and the urgency of the symptoms of adynamia present in each case. I have employed, and I believe with much advantage, the chloride of soda, by the stomach, and, locally, as a wash to the throat. The chlorinated mixture recommended by Dr. Watson, in his Lectures, as a remedy in scarlatina, has in my hands, also, proved decidedly beneficial. In many instances when the patient is seen early in the attack, some advise an emetic of sulphate of zinc to be given; we have seen, we think, much good result from the practice. The remedy with the effects of which I have been the most pleased, has been a combination of calomel, muriate of ammonia, ipecac. and extract of hyoscyamus—from 1 to 3 grains of the first, 2 to 4 grains of the second, ¼ to ½ a grain of the third, and from ¼ to ½ or even one grain of the fourth article, for a dose. To be repeated every two, three, or four hours. The dose, as well as the intervals of its repetition, to be regulated according to the age of the patient, the stage of the disease, and the urgency of the symptoms present.

"At the very commencement of the attack, when the diphtheritic deposit is small in amount, and confined chiefly to the anterior portion of the fauces, it is probable that a judicious application to the throat of nitrate of silver may have the effect of so modifying the morbid condition of the part as to prevent the extension of the disease and any very severe affection of the pharynx or larynx. As a general thing, how

ever, I have not found the free and repeated use of the nitrate of silver, nor, indeed, of any of the caustic and stimulating applications to the throat so commonly prescribed in diphtheria to be productive of any decided good. In mild cases these applications have appeared to me to do positive harm, while in the more violent they do good, to say the least of them. In some instances, the application to the throat of the tincture of the muriate of iron, largely diluted with water, two or three times a day, or oftener, by means of a swab or brush, has appeared to me to be attended with beneficial results. I may make a similar remark in reference to a wash for the throat of diluted pyroligneous acid, or diluted hydrochloric acid and honey, or a strong solution of alum and honey. Gargles of a strong infusion of sage, rendered rough with alum and sweetened with honey—a saturated solution of borax and honey, or a solution of chloride of soda, one pint to sixteen of water, will often be found decidedly beneficial.

"Care should always be taken to supply the patient, at short, stated intervals, with good beef tea, chicken broth, new milk, cream, plain egg custard, oyster liquor with crumbs of cracker broken in it. The patient will often refuse to take food from, apparently, an inability, or perhaps a fear to swallow; by perseverance, however, and proper management he may, in general, be induced to take properly prepared nutriment up to even an advanced stage of the disease. During convalescence the diet should be improved as rapidly as possible, by the addition of the more easily digested meats, plainly cooked; with such vegetables as will be least liable to disturb the stomach or bowels.

"Cold water, as a means of quieting thirst, should be allowed, as well during the disease as during convalescence. It is peculiarly grateful to the patient, and a soothing application to the throat. Ice cream will often be taken, and has always appeared to me to do good by its coldness, and its lubricating properties, independently of the nutriment it furnishes.

"For a long time after convalescence has set in, it is all important to guard against cold and damp, and to protect him from any undue amount of exertion. His life even may be jeoparded by a neglect of this precaution."

CLINICAL RESEARCHES UPON AUSCULTATION OF THE HEAD.

By HENRY ROGER, M. D., Prof. Fac. Med. Paris.

It is well known that the first application of the discovery of Laennec to the diagnosis of diseases of the brain was made by Dr. Fisher, of Boston. In 1832 this physician communicated to a learned society a memoir upon the *cephalic bellows sound*, and transmitted his interesting researches to the *American Journal of Medical Science*, Aug. 1838. "Auscultation," said Dr. Fisher, "may be as useful in the symptomatology of the affections of the brain as it is in those of the chest, and may furnish a pathognomonic sign of these diseases."

After having traced the rules of cerebral auscultation, and indicated the normal sounds which reach the ear when applied to the head, and having distinguished those which come from the nasal fossæ, and which belong to respiration and phonation, as well as those which proceed from deglutition and from the head itself; after having distinguished all these from abnormal sounds, Dr. Fisher considers the *cephalic souffle* in diseases of encephalon. He mentions, among other affections of which an abnormal bruit is one of the symptoms, *chronic hydrocephalus*, *cerebral congestion*, either simple or resulting from disordered dentition or hooping-cough, *accute inflammation of the encephalon or its membranes*, *abscess* of the brain and *induration* of that organ.

Dr. Whitney went even further than his colleague in his opinions with regard to the symptomatological value of the cephalic souffle (*American Journal of Medical Science*, Oct. 1843). To the affections mentioned by Dr. Fisher—cerebral congestion, meningitis, &c., in which the stethoscopic phenomena were present, he adds scirrhous transformation of the cerebellum, and mechanical compression of the brain. He says, moreover, that he perceived a *cerebral ægophony* in hydrocephalus, a bruit similar to the *catarrhal fremitus* in aneurism of the arteries at the base of the brain, and finally he points (and with reason, in certain cases) to the existence of a *cephalic souffle* in *anæmia of the brain* and also in *chlorosis*.

Notwithstanding the labors of these two American authorities, each of whom confirmed the observations made by the other, and in spite of results which generally agree, and which seem to have the testimony of numbers—for the facts in their memoirs count by hundreds—cerebral auscultation, which promised to throw an unexpected light upon a very obscure point in pathology, met with but little favor. The European medical journals confined themselves to incomplete analyses and short extracts; while but few practitioners thought it their duty to repeat the experiments necessary for a criticism of the facts which had been stated by our American brethren, as if they mistrusted a discovery coming from such a distance.

In the year 1841, in the first edition of the *Traite Pratique d'Auscultation*, mention was made of the observations of Drs. Fisher and Whitney; but the experiments to which M. Barth and I devoted ourselves for testing their truth, though certainly not very numerous, only gave us negative results. After having searched in vain to discover a cephalic souffle in certain cerebral affections, and having been unable, in twelve or fifteen cases of meningitis, to hear any such, while the American doctors declared it to be present in all; strengthened besides in our scepticism by the silence maintained by MM. Andral and Bouillaud upon auscultation of the head, and by the equally negative observations of MM. Fournet and Vernois, in nine or ten cases of meningitis, and of Professor Piorry,* we thought it right at that time, and in subsequent editions of our work, to express doubts of this new application of the stethoscope, and were led to dispute, if not the reality, at least the importance of auscultation of the brain.

Still I always regretted this summary condemnation of the undoubtedly conscientious labors of two professional brethren. That results stated in America as certain should be absolutely and generally denied in Europe seemed not a little extraordinary; and we must either suspect the mode in which the physicians on the other side of the Atlantic made their obsertions, or confess that in this hemisphere we were deaf to sounds distinctly heard in the other. Shall we say with Harvey's adversary, the old Venetian physician, "*quem nos surdastri audire non possumus*"—"in Europe people are deaf; they only hear that in America '*tantum modo in America exauditur.*'"

As the only means of deciding the question was by making

* Traite de pathologie iatrique, tom. viii, p. 353.

more minute clinical observations, I devoted myself patiently to this difficult task, and began afresh the study of cerebral auscultation. My researches were almost exclusively among children,* because it is chiefly among them, when at the breast, that Drs. Fisher and Whitney said they heard the stethoscopic phenomena, the discovery of which they announced; and because the difficulty of diagnosing diseases of the brain is greater in childhood than in later life, a greater interest belongs to the progress which symptomatology would make in this department. I may add in passing that it is only among children, whether subject or not to cerebral disease, that auscultation of the brain is likely to be of use; for beyond a certain age, or beyond a certain period in childhood, the most practised ear applied to the cranium cannot detect morbid cephalic bruits.

Since I began collecting the observations which form the subject of this memoir, several authors have been similarly engaged in cerebral auscultation, among others MM. Rilliet and Barthez, and M. Hennig, head of the Children's Hospital at Leipsic. The first, in their admirable work (2d edit., vol. ii. pp. 158–9), make some remarks on the cephalic souffle in cases of hydrocephalus and in rachitis; I shall have occasion to quote the passage where they speak of this bruit under the head of the diagnosis of these affections. The German author has written a monograph upon this subject, and in a pamphlet of not less than thirty pages (*Archiv fur physiologische Heilkunde.* Stuttgart, Aout 1856) he reproduces, with annotations and additions, the inaugural thesis of Dr. Wirthgen (*De strepitue qui in capite auscultando auditur*, Leipsic, 1855), which indeed appears to owe its birth to him, and in which he successively studies the normal and abnormal bruits discovered by cerebral auscultation, the seat of those bruits, the age at which they are heard, their physiology and pathology, and especially the mechanism of their formation, and from these he deduces the results which the physician may expect to find in practice. I had completely devoted myself to the study before I became acquainted with the researches of M. Hennig, and we shall see, by the details of my observations, how far my conclusions agree with his.

Perhaps the admirable work of the Leipsic physician is faulty from a want of method and perspicuity, of which French

* I have never been able to detect any cephalic bruit among adults, either in apoplectic patients, or young chloro-anæmic females.

readers complain greatly in the writings of the learned German author. M. Hennig does not give with sufficient clearness the details from which he drew his deductions, nor his mode of proceeding in collecting facts; the number of cases from which he decides (and they do not appear to be very numerous) are not indicated with precision; all this necessarily diminishes the value of his statements.

In order that I may not incur the reproach just cast upon the German author, I may say that the conclusions which are recorded in this paper were drawn from an examination and comparison of a very considerable number of observations, their total being nearly 300; at first they were gathered from cases selected from among children whom I thought were affected with cerebral disease, or were the subjects of rickets; then (having determined the existence of a cephalic souffle among children of healthy appearance) I afterwards examined all cases indiscriminately, whether in the wards of the Hospice des Nouveaux Nes, the Hopital des Enfants, or in private practice.

Plan of the Memoir.—Having made these preliminary observations, we come now to the study of facts, and after having traced out the *rules* which facilitate auscultation of the head, I shall point out what *physiological bruits* the ear discovers when applied to the cranium; and in a third chapter, the longest and most important, *morbid bruits* will be specially considered.

Section 1. *Rules for Cerebral Auscultation.*—When a patient is submitted to stethoscopic examination the most convenient position is the horizontal, with the head placed upon a pillow slightly raised; this may be inclined to different sides, according as it is desirable to examine the occipital, frontal, or temporal regions, etc.

In examining an infant at the breast, it should be seated on the knee of its mother or nurse, and the head should, if possible, be held steadily, either by the hands placed softly on either side, or by leaning it against the mother's breast. If the patient be in a comatose condition from some cerebral affection, auscultation will be easily performed. It becomes difficult when the child cries or moves about, which is usually the case; we must then try to quiet it by suckling and auscult it while it is at the breast, the bruit of deglutition being no obstacle to the recognition of morbid cephalic bruits.

If the examination be impossible while awake, it must be abandoned till an attempt can be made in quieter moments, or

we may make the attempt during sleep, which is generally sufficiently profound not to be disturbed by the examination of a physician.

The auscultation may be either *direct* or *indirect*. Dr. Fisher found the latter the most convenient, the ear adapting itself exactly to the rounded or projecting surface of the cranium. Care must be taken to prevent the rustling of the hair; also, as a matter of cleanliness, the child's head should be previously covered with a napkin, which may serve at the same time to keep it more firm. Auscultation, practised thus directly, possesses some advantages; whatever may be the cries or agitation of the little patient, one always finds, in applying the ear quickly and somewhat firmly to the middle of the anterior fontanelle, that we catch, so to say, the sound of a cephalic souffle. But when the child is asleep, or when it is willing to remain quiet, mediate auscultation is preferable; it allows the detection of the bruits with greater precision and exactness, and we may also isolate them, so that those which are natural are not confounded with those which are abnormal.

For this purpose the ordinary stethoscope, which has been generally substituted for the primitive cylinder of Laennec,* answers perfectly; held as a pen in writing, it should be applied over the different regions of the cranium, and be kept fixed in the same way as for auscultations of the vessels of the neck. M. Hennig recommends the employment of a flexible stethoscope, twenty-three centimetres long, having for its middle portion a tube of vulcanized India-rubber. This stethoscope is certainly preferable, for with it we can easily follow the movements of the child during the examination.

On what regions of the head should the instrument be applied in order the better to detect the physical phenomena? If Drs. Fisher and Whitney are correct, the bruit of the cephalic souffle is so evident that it suffices to apply the ear to any parts of the cranium in order to discover it immediately; but our experience does not bear out this assertion. It may be true that the bruits of nasal respiration, and of deglutition, are perceptible over nearly the whole surface of the head, but this is certainly not the case with the genuine cephalic souffle, which we have most frequently heard in the region of the anterior fontanelle, and still more plainly when we auscult over the fontanelle itself. It gradually diminishes in intensity the further we remove from that point, which ap-

* Traite Pratique d'Auscultation, cinquieme edition, p. 19.

pears to be the center whence the bruit starts; then gradually becoming more feeble along the parietal or frontal sutures, it is completely lost further away, the finest ear failing to discover any sound over the lateral surface of the cranium and the occipital protuberances.

The physician who cannot count for long docility of his little patient would do well, if he wishes to detect the cephalic bruit, at once to place his stethoscope on the summit of the cranium over the depression corresponding to the anterior fontanelle; it is there, as we have said, that the abnormal bruit exists in its greatest intensity, and the examiner, if he does not detect it at that point, may dispense with any further investigation.

Section II. *Physiological Bruits.*—When we practice auscultation on the top of the head of a healthy subject, different bruits are heard.*

I. One is produced by the circulation of the air in the nasal fossæ; this is the *cephalic bruit of respiration* mentioned by Dr. Fisher; it is very intense and harsh, and analogous to the laryngeal respiratory murmur; it coincides with the respiratory movements, increasing in strength and frequency when these are accelerated.

These characters are sufficient to distinguish it from other cephalic bruits; but in some cases of extreme dyspnœa the nasal respiratory bruit is so frequent and quick that it might easily be mistaken for the cerebral vascular souffle of which we have just spoken, and the two phenomena might be confounded were it not for the close relation which the first bears to the movements of the thorax.

When the pituitary membrane is thickened or there is much secretion of mucus, the respiratory cephalic bruit is transformed into a sibilant rhonchus, or into a kind of coarse crepitation; the same physical conditions of the mucous membrane exist as in bronchitis, and consequently the same rales are heard.

Nor is this all; in affections of the larynx, the bruits caused by the passage of the air along the laryngo-tracheal tube are drier and more or less prolonged, extending above into the nasal fossæ as well as into the bronchial tubes below, and the rhonchus or laryngeal hissing (similar to the bronchial rales)

* In treating here of *auscultation of the head*, I shall not consider *aneurisms* of the larger arteries of the brain, nor *diseases of the ear* (see the work of M. Gendrin and an admirable article by M. Menier, in the *Traite pratique d' Auscultation*, 5th edit. p. 562.)

everywhere heard is more perceptible in auscultation of the head than it is in that of the chest.

With regard to the rales formed in the lungs, these are not heard from so great a distance, and they escape stethoscopic examination when practised on the head; in the very exceptional case of a young phthisical girl I was able to detect, by cerebral auscultation, a loud gurgling which was produced in a cavity in the subclavicular region.

II. If the child speaks or cries the *vocal sounds* are heard very distinctly, and the ear, when applied to different parts of the cranium, perceives a very remarkable resonance; this *cephalic resonance* may be compared to that which is heard so loudly in the larynx, it has nasal timbre which varies in different individuals, it is always very piercing, the voice seeming to proceed from the cranium.

III. Placing the stethoscope on the head, another peculiar bruit may be heard, that of deglutition; in new-born infants there is also that of suction. This bruit is so singular and so readily recognized that there is no need to describe it. We hear it more distinctly by direct than indirect auscultation, and in cases where the nurse appears to have but little milk, and when consequently the child makes frequent efforts at suction without our being able to decide the fact of its having swallowed anything, we may be able to determine this by cerebral auscultation, the bruit of deglutition comes very strongly upon the ear, and we are therefore better able to appreciate the quantity of milk supplied and swallowed.

Such are the *extrinsic bruits* revealed by cerebral auscultation; moreover, it is not impossible to a practised ear to hear in some subjects, especially in cases of palpitation, the two sounds of the heart propagated from the solid walls of the cardiac region up to the head. In forty-two healthy infants five times I was able with attention and patience to perceive the tic tac of the heart in ausculting over the cranium. In another case, I have been able to hear a strong bellows-sound originating in the left auriculo-ventricular orifice; but this last case was exceptional. More frequently the cardiac sounds themselves escape observation in auscultation of the brain; and we may, for greater simplicity in studying the subject, omit the *cardiac cephalic bruit*, at least as it has been described by Drs. Fisher and Whitney.

With much greater reason we shall contest the possibility of recognizing with the ear the modifications which so-called cerebral diseases create: for example, Dr. Fisher says he is

able to discover in almost every case (thanks to his aptitude for cerebral auscultation), the impulsive character of the pulsation which he supposed to belong to apoplexy. These, however, are minutiæ of such exceptional cases (*rara non sunt artis*), and tend only to embarrass without enriching semeiology.

IV. Are we, then, to include in the physiology of the subject an *intrinsic bruit*, the *cephalic souffle*, an essentially pathological phenomenon?

On this point, those authors who have specially directed their attention to auscultation of the brain are far from being agreed. With the American observers, the souffle is always abnormal, it is never a healthy phenomenon. Dr. Fisher expressly says, "it depends always upon some cerebral affection." Dr. Whitney equally insists upon the proposition, that auscultation never reveals anything like a cephalic souffle in the normal condition.

M. Hennig, on the other hand, believes that the souffle belongs rather to a state of health;* and, further, this bruit, which according to the American doctors would be much more manifest as the cerebral affection became more marked, would, according to the Leipsic physician, sometimes disappear in sick children, to reappear with returning health.

If we seek among our own facts whether the American or German authors are right, the first declaring that in the normal state the cephalic souffle is never heard, and the second being of opinion that it is always heard; we incline to believe that both are equally wrong, and that these two exclusive opinions are alike to be condemned.—*London Med. Rev.*—*American Journal.*

* So we gather from several confused passages in his Memoir where cephalic bruits are considered. "We have heard these bruits (M. H. does not say which) on the head from the twentieth week to the sixth year.——These bruits have been present in healthy children at the twenty third week." (*Loco cit.* p. 413.) "The souffle or hissing which is present in *healthy* children. (*Ibid.* p. 415.) "These bruits are sometimes wanting in sick children, but reappear with convalescence." (*Ibid.* p. 413.)

SUBSTANCE OF A CLINICAL LECTURE ON A CASE OF EMBOLON OF THE FEMORAL ARTERY PRODUCING GANGRENE OF THE FOOT—FATAL RESULT.

Under the care of Dr. Pitman and Mr. Prescott Hewett.

James M——, aged fifty-six, was admitted in November, 1861, under the care of Dr. Pitman. The patient was just convalescent from a severe attack of dropsy connected with heart-disease; and he was going about the ward up to the 17th of December, when he was suddenly seized with violent pain in the left groin, "exactly as if he had been shot." From that moment the limb became numb, cold, and quite powerless: "it felt as if it was dead;" and he was obliged at once to take to his bed again. All that afternoon and night he suffered intensely; and when seen by Mr. Hewett, at Dr. Pitman's request, he was still complaining of great pain in the whole of the limb, but especially in the groin. The limb was colder than the rest of the body; and there were blotches of discoloration spreading over the toes and back of the foot, with a slight œdema, and considerable redness extending half-way up the leg. A careful examination of the groin, at the exact point where the pain had been so suddenly experienced the day before, showed that the femoral artery was plugged. Reduced as the patient was from long-continued suffering, the size and exact limits of the plug could be distinctly made out. It began at about two inches below Poupart's ligament, and extended for three-fourths of an inch down the course of the vessel. At this spot it was quite hard, round, and rolled under the finger; pulsation was felt above, but not below, the plug; no pulsation was present in any of the arteries of the leg or foot. The general aspect of the patient was unhealthy; the skin of yellow tinge; countenance sunken, anxious, and worn; pulse intermittent and very feeble. The heart's action was irregular and feeble; but there was no valvular disease. The diagnosis arrived at was blocking up of the femoral artery by a plug of fibrin washed from the heart. The limb was wrapped in cotton-wool, compound soap liniment was rubbed in the groin to ease the pain, morphine was given, and stimulants freely. The gangrene advanced slowly about the foot; the toes became shrivelled, black, dry, and nummified; and

the œdema and redness increased. The man became weaker and weaker, and died on the 23rd of January, 1862. A few days before his death the gangrene ceased, after involving two-thirds of the foot. On a consultation, considering the man's low typhoid condition, it was decided not to attempt any operation.

Autopsy.—The plug in the artery measured three-quarters of an inch, and was situated in the upper part of the superficial femoral; and, exactly corresponding to the seat of obstruction, the parts around were thickened, and the vessel was firmly adherent to the sheath and to the vein. This plug was throughout adherent, and was hard, rusty on its surface, fawn-colored, deep-seated, and like the fibrinous layers of an old aneurism. The heart was large and flabby; there was no endocarditis nor disease of the valves, but entangled among the fleshy columns of the left ventricle, and filling up and projecting beyond the interspaces, where several large fibrinous masses, for the most part of a fawn color, very firm, and evidently of long standing; and a similar mass, of large size, was also found blocking up the left auricular appendix and projecting into the cavity of the auricle itself, where it was pendulous. Besides these there were also (especially in the right ventricle) some loose coagula of recent formation. The large vessels were healthy. The lungs were inflamed at their lower part. At the upper and lower parts of the spleen were two very large fibrinous concretions, of a deep-yellow color and firm in texture; and the arteries leading to them were found blocked up with fibrin. All the other viscera were healthy.

In commenting upon the case, Mr. Hewett remarked that it afforded for consideration some important points in surgery. First, as to the diagnosis. What led to the conclusion that the case was one of embolism? "The gangrene of the foot and the condition of the leg showed that there was obstruction of the arterial system in some part of the limb. Then came the question as to the precise locality of the obstruction. This man, you will remember, had "felt as if he had been shot in the groin." Well, that led at once to the examination of the femoral artery at this spot; and there the vessel was found blocked up. But what caused the obstruction? Was it an embolus? The sudden shooting pain in the groin, the immediate loss of sensation in the limb, the complete obstruction of the vessel, the limited extent of the plug, and its precise locality—about the giving-off of the deep femoral,—all

tended to prove that the plug had not originated in the artery itself, but had come from a distance. Whence came the plug? From the left cavities of the heart, in all probability. To this, however, it may be objected that there was nothing to prove the existence of anything like vegetations on the surface of the valves. True; but there may be some fibrinous coagula entangled in the meshes of the fleshy fibres of the heart, and one of these coagula may have been washed from its place, and swept along the arterial current until it was suddenly stopped by getting into a vessel through which it was too large to pass. And, moreover, even supposing that vegetations had existed on the valves, a vessel of the size of the femoral could hardly have been blocked up by one of these vegetations set loose. The portions of such vegetations when washed off from the endocardium are generally of too small a size to plug the main artery of a limb; but they pass into the lesser branches, and, for the most part, lead to mischief about the brain, the spleen, the kidneys, or the liver."

That this reasoning was correct post-mortem inspection proved. A reference was made to cases recorded by M. Nelaton and Mr. Sibley: in them, as in the foregoing case, the embolism was the result of a fibrinous clot, and not arising from vegetations.

Mr. Hewett then entered into the question whether the case was one of arteritis, and not of embolism; and he showed that it could not be the former, chiefly for the reasons that the man lived thirty-seven days after the commencement of the attack (hence the adhesion of the plug to the artery), and that the inflammation did not precede but followed the plugging of the artery; and the condition of the spleen after death further proved the case to be one of embolism.

The question of amputation in gangrene connected with embolism he thought an important one. In the present instance it was set aside by the patient's general condition, which was so thoroughly hopeless that all thought of operating was abandoned, even from the beginning. Had the general health been otherwise, amputation might have been performed with good prospects of success. In a case of embolism with obstruction high up in the limb he thought amputation quite useless until after the setting up of the line of demarcation, without which it is impossible to say what parts may or may not become involved in the gangrene. But in a case of rapidly advancing gangrene, in which the patient has but too evidently only a few hours to live unless something is done,

and that without delay, it would be right to amputate at once, provided the plug in the artery be at a sufficient distance from the trunk to admit of removing the limb above the seat of obstruction.

In conclusion, Mr. Hewett referred to the treatment of aneurism by breaking up the coagula, which had been proposed by Mr. Ferguson. This treatment he considered, in fact, embolism artificially produced; and if resorted to in aneurisms connected with the current of blood proceeding to the head, it may, there is no doubt, lead to disastrous results —results the very same as those described in Dr. Kirk's paper. Hemiplegia, doubtless due to embolism, followed the breaking up of the coagula in an aneurism of the subclavian artery in one of Mr. Ferguson's cases. Last year another was mentioned by Mr. Teale, of Leeds; and a third case, for the reference to which he (Mr. Hewett) was indebted to his friend Mr. Ernest Hart, occurred in the practice of Professor Esmarsh, of Vienna. In this last case, post-mortem inspection proved the truth of the supposed cause of the head symptoms.—*London Lancet.*

IS ALCOHOL FOOD?

By THOMAS INMAN, M. D., London,
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The author first devoted a few words to definition stating that by "alcohol" he intended to comprise those liquors in common use which owed their effects to alcohol; and by "food," anything which supplied food by which the body was nourished. He then adverted to the fact that a saccharine material was found in the blood of all mammals when it entered the lungs, and to the strong probability that a fermentative process took place in those organs, with the extraction of carbonic acid, the actual source of which in the blood had not yet been absolutely ascertained. The close atomic composition of starch and sugar and alcohol *plus* carbonic acid was pointed out; also the fact that the starches, &c., and alcohol were often tolerated by delicate stomachs when other ingredients were not tolerated.

The author then shortly summarized the effects of ordinary food, whether animal or vegetable, when taken with water for

a beverage and in proper quantity, and compared these with the results following a temperate draught of ale or porter; showing that there was no real distinction between the one and the other, except that the liquid sooner entered the circulation and sooner left it. It was no argument against the use of beef that a man who had dined on it one day wanted a dinner the day after; nor against beer, that a person who had taken one glass was ready for another in a few hours. The prejudicial effects of excessive eating were adverted to, and after mentioning a few instances where guzzling had proved fatal, others were alluded to in which a prolonged lethargy or an apoplectic condition had been induced. The use of beef-tea sometimes produced convulsions in infants, but this result did not vitiate the dietetic value of meat. The physical condition of excessive eaters was then spoken of, and it was shown that some were thin, others stout; and that as regarded the moral condition of those who, from choice, religious belief, or necessity, abstained from the use of alcoholic beverages, they were to the full as bad as those who indulged in drink. Cannibals were teetotallers, and neither Nana nor Tippo was a drunkard. On inquiring into the habits of total abstainers and those who drank ale, wine, etc., the author had ascertained that the former habitually ate much more than the latter; and one of three deductions was necessary: either the former ate too much, the latter too little, or the drink of the one was equivalent to a portion of the food of the other. To ascertain which of these alternatives was nearest the truth Dr. Inman experimented in his own person, and had made numerous observations through the assistance of friends. The conclusion he came to was that which had been previously insisted on by Mr. Lewes and others,—namely, that alcohol replaced a certain amount of food; and "as things which are equal to the same are equal to one another," he inferred that if a glass of ale was equal to a slice of mutton in its satisfying effect, and that mutton was food, it must follow that ale is food. To say that persons could not live on ale, was of no value as an argument; for no one could live on biscuit alone, though bread was called the staff of life. To ascertain how long it was possible for any one to live on alcohol alone, he had for several years been seeking information respecting drunkards, and he mentioned two—one on the authority of the individual herself (a surgeon's widow), and the other on the authority of the medical attendant, where patients had subsisted for a prolonged period on brandy-and-water alone. He mentioned

others on the authority of other medical friends, and two which he had himself been conversant with. He combated the idea of the probability of imposture, inasmuch as in all these cases solid food was loathed excessively, and was generally rejected by the stomach. He then mentioned some cases of children that he had attended, in whom the appetite had failed entirely, where food which was administered by force had been vomited, yet in these alcohol in one form or other gave the support which other food did not, and gradually restored the appetite to its normal state. He noticed, too, that infants at the breast, when ill, would digest brandy-and-water when they would reject all else. The advantageous influence of this fluid was apparent even if it were administered in enemata.

A definite course of induction, irrespective of chemical theory having ended in the conclusion that alcoholic drinks were strictly alimentary, he shortly referred to the statements which were relied upon to demonstrate the contrary. If alcohol, he said, passed out of the system unchanged, so did water; yet water was absolutely necessary to life. But there was no proof that the alcohol imbibed in a long symposium ever left the body. He inferred that if it did pass out of the lungs in vapor as largely as was assumed, a party of spirit drinkers would make the air of a closed room explosive; and he recalled the statement of Percira, that some northern race had found that two or three people in succession might keep up intoxication with "lolium temulentem" by drinking the urine of the first eater; yet none had discovered that the urinal of a drunkard contained anything equal to gin. But certain foods, as oatmeal, bran, potatoes, oats, etc., were not wholly retained in the system, yet they were alimentary.

Dr. Inman then combated the idea that alcohol was a mere stimulant, by contrasting it with turpentine, cantharides, ginger, cayenne, iodide of potassium, and other drugs, which were stimulants to every part of the body to which they were applied. He argued that alcohol could not simply be a conservator of tissue; for a glass of ale after a long walk would induce plentiful perspiration, and a glass of whisky or gin-and-water acted with most people as a powerful diuretic. Nor could we conclude that it assisted in disintegrating the tissues; for if it did, the use of ale, wine, or spirit must then be antagonistic or antidotal to food, and the winebibber must necessarily require more food than the teetotaller, whose tissues were not disintegrated by artificial means.

He then summed up his conclusions thus:

1. Nature has provided in the salivary glands, the liver, and the lungs of every mammal an apparatus for converting all food, especially farinaceous, into alcohol; and we have no evidence that such conversion does not take place.

2. One form of alcohol or another is available for the support of life, and for restoration to health when no ordinary food can be or is digested.

3. Alcohol, after being taken, is incorporated with the blood, passes into the various tissues, and ultimately disappears, a small portion only passing away in the breath. We can say no more of bread, potatoes, or oatmeal porridge, a small portion of each of which passes out of the body with the fæces.

4. Alcohol in the form of ale, porter, wine, etc., relieves hunger and quenches thirst simultaneously, and with a completeness that is not equalled by water, infusion of gentian, cayenne pepper, or by turpentine—i. e., it does not act as water simply, or as a stimulant alone.

5. Wine, beer, etc., satisfy the appetite when taken alone, and act for the time like any solid food would do.

6. When alcohol is mingled with other food, a less amount of the latter suffices for the wants of the system than if water had been used as the drink.

7. The various forms in which alcohol is taken have as marked and specific effects as have animal and vegetable articles of diet.

8. Individuals have subsisted wholly upon one or other of the various forms of alcohol in common use for periods of great length; and as it is illogical to conclude that they lived on air, without food, or on flies like chameleons, the conclusion is irresistible.

What that conclusion is, it might be left for every thinking man to decide.—*London Lancet.*

TREATMENT OF SCARLATINA.

By T. HILLIER, M. D.

In estimating the effects of treatment, it is very important to remember that in this, as in many other diseases, some cases are so severe that no treatment will prevent death; that

other cases are so mild that they will recover even if left to themselves, or badly treated; whilst a third set of cases of intermediate severity, if well treated, will recover, and the speed and completeness of their recovery will be influenced by the mode of treatment; but the same cases, if injudiciously treated, will not recover at all, or recovery will occur only after more protracted illness, and with greater damage to the constitution.

Fully to judge of the value of our treatment, we ought to know how similar cases progress if left to themselves; this our homœopathic neighbors, if they practice as they profess, might give us an opportunity of observing. We may, of course, learn much by comparing cases treated on one plan with others treated on a different plan; but here, too, we must be careful to compare cases of equal severity, and as nearly as possible alike. We have not arrived at any specific antidote to the poison of scarlatina by which we can either prevent its taking effect, or counteract its influence when in operation. As a preventive belladonna has been vaunted, but it has not stood the test of careful experiment. We know of no means of prevention but the avoidance of exposure to the infection.

This disease is frequently spread in public schools by children convalescent from the disease returning too soon after their illness to associate with other children; it is also not uncommonly spread by patients conveyed in cabs and other public vehicles. Medical men should always wash their hands after touching a case of scarlatina, and, if possible, walk some time in the open air, and change their coats, before seeing other children.

Some future Jenner may discover that the inoculation of a disease bearing the same analogy to scarlatina which cowpox does to smallpox, will prove a protection against it. At present all we can do is to combat symptoms as they arise, and help Nature to get rid of the poison. Mild cases of scarlatina require but little medical treatment. The patient should be kept in bed for a fortnight, and not allowed to leave his room for three weeks; the diet should be bland and simple (animal food being forbidden); the bowels may be regulated by mild aperients; the skin may be sponged frequently with tepid water; and the bedroom should be kept cool and well ventilated. Some simple saline medicine may be given. The plan adopted in this hospital instead of sponging, has been to anoint the whole surface twice a-day with suet. It is grateful

to the patient, relieving the sense of tingling and burning heat which is frequently complained of. During convalescence the use of warm baths is indicated. If desquamation is active the hot-air bath is very useful in combination with warm water baths. This measure is especially desirable if there be albumen in the urine and anasarca.

In severer cases, quite at the outset an emetic of ipecacuanha should be given, and if the tongue be much coated an aperient dose of rhubarb and sulphate of potash may follow at the end of twelve hours. In the malignant cases, with much depression and sensorial disturbance from the first, the emetic and aperient should be omitted. In these cases, I believe, the best medicine to give is the sesquicarbonate of ammonia; and to promote the action of the skin, it may be combined with a good dose, one or two drachms, of liq. ammonia acetatis. The carbonate of ammonia may be given in doses of two, three, four, or five grains, according to the age of the child, and with frequency proportioned to the severity of the case.

In coses where the nervous symptoms predominate, such as delirium and convulsions, and the heat of the skin is very great, a remedy has been recommended, which I have only tried once, but on that occasion it certainly seemed to do good. It was first recommended by Currie, and has since been occasionally praised by others; it is spoken of very favorably by M. Trousseau. I refer to cold affusions. They have been less frequently resorted to than they probably otherwise would have been, owing to the apparent boldness of the practice, and its running counter to popular prejudice on the subject. Trousseau says: "For a long time I have employed these affusions. I declare to you that I have never administered them without deriving from them some benefit. I do not pretend that all my patients have been cured; those who have died have experienced temporary relief; the affusion, far from being injurious to them, has always moderated the symptoms, and has always appeared to retard the fatal issue." He then quotes several very severe cases in which this practice was attended with apparently the greatest benefit, and the patients made favorable recoveries.

His mode of proceeding is as follows: The patient is placed in an empty bath, and there are thrown on him three or four pails of water of a temperature from 68° to 77° Fahr. The patient is immediately afterwards wrapped in bedclothes, and placed on the bed without being wiped, but suitably covered up. Generally reaction is established before fifteen

or twenty minutes have elapsed. The affusions are renewed once or twice in twenty-four hours, according to the gravity of the symptoms.

The benefits derived from this treatment, according to Trousseau, are a reduction of the frequency of the pulse, a lowering of temperature, a cessation of delirium, and a diminution of the patient's restlessness and general distress. He also states that it usually renders the eruption more vivid, and never has the effect of "striking in" the rash, as it is called.

In the case in which I employed it there had been delirium and restlessness, and great heat of skin; there was no rash. The affusion was practised with water at a temperature of about 80°. The patient expressed herself as feeling much more comfortable a few minutes after the treatment; the temperature three hours later was nearly as high as before, but the skin did not feel so pungent or dry. From this time the patient continued to improve without an unfavorable symptom. It is true that the treatment was here applied about a date when improvement frequently occurs—namely, on the sixth day of the disease; but I confess that I have not often seen a case suddenly take such a decidedly favorable turn on any other plan of treatment. I intend, when another suitable case presents itself, to make a further trial of this remedy. As originally practised by Currie, the water used was of a lower temperature (the coldest he could procure), and affusion was repeated every two or three hours if the patient's symptoms called for it. Where the heat of skin was not so great, tepid water was used. This remedy is not applicable to cases where reaction is not well established, as in cases of extreme malignancy. The wet sheet I have tried in two cases, with satisfactory results.

As the fever subsides, and the patient is left languid with a pulse soft and slower, and skin cool, quinine is very useful.

The throat, if much involved, will require treatment. For mild cases a gargle of lemon juice and honey is agreeable and useful. For redness and swelling the use of chlorate of potash in solution (eight or ten grains to the ounce) is advisable, either as a gargle, or, if the child be too young, as a wash to be injected into the mouth with the patient sitting up. If there be much swelling, the employment of tannin, either by insufflation as a powder, or in solution as a wash, is beneficial. Ice may also be given with benefit. If the tint be somewhat livid and dusky, tincture of capsicum may be advantageously added to the gargle. This remedy is strongly recommended

internally by some writers on malignant scarlatina. Externally it is well to keep warm-water dressing, a bran poultice, or spongio piline around the throat. If the nose and mouth become clogged, it is important that they be syringed out frequently with warm water, or soap and water, followed by a weak solution of sulphate of copper in a few days, to prevent obstruction to respiration. If the secretion is thin and acrid, lime-water is best. In some cases, where the pulse is soft and frequent, and there is much depression, it is well to give wine from the first; and very often about the fifth day, when the tongue becomes dry, and the pulse becomes weak and falls in frequency, wine will be required if it has been withheld before. The effect of stimulants on the urinary secretion should be carefully noted, and if there be albumen in the urine, and a notable reduction in the quantity of urinary solids, they must be withheld. When there is much swelling of the neck coming on after the first week of the fever, stimulants are, I believe, indicated, and poultices should be applied externally. No good has been derived in these cases from the use of leeches. If matter forms early, lancing is desirable. For albuminuria or hæmaturia, with or without dropsy at the commencement, the great indication is to obtain a free action of the skin. This may be generally secured by small doses of antimonial wine with liquor ammoniæ acetatis, and the employment of the hot-air bath every night. It is well, too, to act on the bowels every second or third day by the use of compound jalap powder. Diluents, such as barley-water, toast-and-water, should be freely given. If there be much fever, and a tolerably firm pulse at the onset of the renal symptoms, cupping to the loins will probably be of service, and in any case dry cupping will do good. As the fever subsides, if the urine be tolerably abundant and of good specific gravity, but still contain albumen, the use of benzoate of ammonia, in five grain doses, seems to be of use; or if this fail, the tincture of the sesquichloride of iron will generally be of use. Sometimes it will be necessary to suspend these remedies, owing to an increase in the albumen and a smoky color of the water with a scantiness in amount, and to return to the hot-air baths and diaphoretics. The only diuretics besides benzoic acid that are allowable in this affection are, I believe, diluent drinks and digitalis, which appear to be of service when the pulse is quick and heat of skin considerable. Never rest satisfied or think your patient out of danger so long as albumen or still more blood remains in the urine; at

any time while this lasts, one of the secondary inflammations or convulsions may set in, and rapidly carry him off.

If convulsions occur, and the patient be not previously very anæmic, bloodletting must be resorted to once and to a good quantity. This may be followed up by dry-cupping to the loins, hot-air baths, and compound jalap powder or elaterium. Trousseau recommends large blisters to the legs; most English authors forbid blistering in any shape, from the fear that cantharides will act injuriously on the already impaired kidneys. They have been so frequently used beneficially, that this theoretical objection to their employment need not, I think, have much weight. I am not aware that their use has ever been followed by increase of the renal symptoms.

If pleurisy set in, or pneumonia, I advise cupping, with or without the knives, according to the force of the pulse; and the subsequent cautious employment of calomel in small frequently-repeated doses. Here, again, I run counter to a commonly-received doctrine that calomel should not be given in albuminuria; my experience, however, inclines me to believe that in the early periods of nephritis, before renal degeneration has much advanced, there is no risk, but positive benefit from its use. If there be much restlessness or distress, the calomel should be combined with Dover's powder. At the same time liq. ammoniæ acetatis and, if the pulse be firm, small doses of antimonial wine may be given. In peritonitis, I believe that opium, with very small doses of mercury, is the sheet anchor. In one very severe case, in which a lady had scarlatina immediately after parturition, followed by peritonitis, the recovery appeared to be entirely due to the use of opium in full doses, combined with small doses of gray powder, until the gums were slightly affected.—*Medical Times and Gazette.*

THE CHLORINE AND MILK TREATMENT OF

SCARLET FEVER AND THE TYPHOID FEVERS.

By CONWAY T. EDWARDS, M. R. C. S. E.

The symptoms, development, and progress of scarlet fever and fevers of the typhoid type, have been so continually brought under public notice, and so ably treated in every

work on the practice of medicine, that it were superfluous to enter upon a consideration of them in this paper, and would not assist in any way the object I have in view, which is, to point out the beneficial influences which a chlorine and chloroform treatment, with a full diet of milk, exercise over these diseases.

It must not be understood that, in advancing these remedies to so prominent a position in the foreground, they are to be regarded in the light of specifics, or as interfering with the anti-phlogistic treatment and regimen which the medical practitioner finds it necessary to adopt during the first stages of febrile disease; but, as possessing the important quality in themselves of at once destroying the putrid effluvia generated by, and thrown off from, the secreting surfaces of the stomach, alimentary canal, kidneys, lungs, and skin, and endowing the system with power to bear the progress of the disease. These effluvia, so poisonous in themselves, on account of the large proportion of sulphurretted hydrogen which they contain, contaminate the air of the sick chamber, oppress nurses and attendants, and are most injurious to the patient. How important, then, must it be to remove them! This chlorine effects: its influence is no question of lengthened time; it commences at once, and continues during the whole course of its exhibition.

Now, as regards "a full diet of milk." From the very commencement of a fever, there is a very great loathing to all kinds of nourishment; the bare suggestion of food creates a shudder, which expresses, more than words can do, how repugnant the idea is to the feelings.

Adopt the once received and re-entertained Brunonian system; give *ab initio* nourishment and tonic medicines, and as the disease advances, with increase of weakness, and ever progressing waste of the solids and fluids of the body, perhaps the real nature of the attack may be suddenly developed and resist every remedial means to overcome it. In no disease is the truth of this more apparent than in typhoid pneumonia. Take a false view of the real nature of the attack; see in the fever everything save the current of inflammation which runs beneath it; suddenly the real truth will be developed, and the engorgement of the lungs is but the precursor of the fatal termination which will rapidly ensue. All antiphlogistic treatment would be useless; calomel and opium and antimony have no time to act, and the patient dies.

But the hourly increasing weakness and waste of the system

other cases are so mild that they will recover even if left to themselves, or badly treated; whilst a third set of cases of intermediate severity, if well treated, will recover, and the speed and completeness of their recovery will be influenced by the mode of treatment; but the same cases, if injudiciously treated, will not recover at all, or recovery will occur only after more protracted illness, and with greater damage to the constitution.

Fully to judge of the value of our treatment, we ought to know how similar cases progress if left to themselves; this our homœopathic neighbors, if they practice as they profess, might give us an opportunity of observing. We may, of course, learn much by comparing cases treated on one plan with others treated on a different plan; but here, too, we must be careful to compare cases of equal severity, and as nearly as possible alike. We have not arrived at any specific antidote to the poison of scarlatina by which we can either prevent its taking effect, or counteract its influence when in operation. As a preventive belladonna has been vaunted, but it has not stood the test of careful experiment. We know of no means of prevention but the avoidance of exposure to the infection.

This disease is frequently spread in public schools by children convalescent from the disease returning too soon after their illness to associate with other children; it is also not uncommonly spread by patients conveyed in cabs and other public vehicles. Medical men should always wash their hands after touching a case of scarlatina, and, if possible, walk some time in the open air, and change their coats, before seeing other children.

Some future Jenner may discover that the inoculation of a disease bearing the same analogy to scarlatina which cowpox does to smallpox, will prove a protection against it. At present all we can do is to combat symptoms as they arise, and help Nature to get rid of the poison. Mild cases of scarlatina require but little medical treatment. The patient should be kept in bed for a fortnight, and not allowed to leave his room for three weeks; the diet should be bland and simple (animal food being forbidden); the bowels may be regulated by mild aperients; the skin may be sponged frequently with tepid water; and the bedroom should be kept cool and well ventilated. Some simple saline medicine may be given. The plan adopted in this hospital instead of sponging, has been to anoint the whole surface twice a-day with suet. It is grateful

to the patient, relieving the sense of tingling and burning heat which is frequently complained of. During convalescence the use of warm baths is indicated. If desquamation is active the hot-air bath is very useful in combination with warm water baths. This measure is especially desirable if there be albumen in the urine and anasarca.

In severer cases, quite at the outset an emetic of ipecacuanha should be given, and if the tongue be much coated an aperient dose of rhubarb and sulphate of potash may follow at the end of twelve hours. In the malignant cases, with much depression and sensorial disturbance from the first, the emetic and aperient should be omitted. In these cases, I believe, the best medicine to give is the sesquicarbonate of ammonia; and to promote the action of the skin, it may be combined with a good dose, one or two drachms, of liq. ammonia acetatis. The carbonate of ammonia may be given in doses of two, three, four, or five grains, according to the age of the child, and with frequency proportioned to the severity of the case.

In coses where the nervous symptoms predominate, such as delirium and convulsions, and the heat of the skin is very great, a remedy has been recommended, which I have only tried once, but on that occasion it certainly seemed to do good. It was first recommended by Currie, and has since been occasionally praised by others; it is spoken of very favorably by M. Trousseau. I refer to cold affusions. They have been less frequently resorted to than they probably otherwise would have been, owing to the apparent boldness of the practice, and its running counter to popular prejudice on the subject. Trousseau says: "For a long time I have employed these affusions. I declare to you that I have never administered them without deriving from them some benefit. I do not pretend that all my patients have been cured; those who have died have experienced temporary relief; the affusion, far from being injurious to them, has always moderated the symptoms, and has always appeared to retard the fatal issue." He then quotes several very severe cases in which this practice was attended with apparently the greatest benefit, and the patients made favorable recoveries.

His mode of proceeding is as follows: The patient is placed in an empty bath, and there are thrown on him three or four pails of water of a temperature from 68° to 77° Fahr. The patient is immediately afterwards wrapped in bedclothes, and placed on the bed without being wiped, but suitably covered up. Generally reaction is established before fifteen

or twenty minutes have elapsed. The affusions are renewed once or twice in twenty-four hours, according to the gravity of the symptoms.

The benefits derived from this treatment, according to Trousseau, are a reduction of the frequency of the pulse, a lowering of temperature, a cessation of delirium, and a diminution of the patient's restlessness and general distress. He also states that it usually renders the eruption more vivid, and never has the effect of "striking in" the rash, as it is called.

In the case in which I employed it there had been delirium and restlessness, and great heat of skin; there was no rash. The affusion was practised with water at a temperature of about 80°. The patient expressed herself as feeling much more comfortable a few minutes after the treatment; the temperature three hours later was nearly as high as before, but the skin did not feel so pungent or dry. From this time the patient continued to improve without an unfavorable symptom. It is true that the treatment was here applied about a date when improvement frequently occurs—namely, on the sixth day of the disease; but I confess that I have not often seen a case suddenly take such a decidedly favorable turn on any other plan of treatment. I intend, when another suitable case presents itself, to make a further trial of this remedy. As originally practised by Currie, the water used was of a lower temperature (the coldest he could procure), and affusion was repeated every two or three hours if the patient's symptoms called for it. Where the heat of skin was not so great, tepid water was used. This remedy is not applicable to cases where reaction is not well established, as in cases of extreme malignancy. The wet sheet I have tried in two cases, with satisfactory results.

As the fever subsides, and the patient is left languid with a pulse soft and slower, and skin cool, quinine is very useful.

The throat, if much involved, will require treatment. For mild cases a gargle of lemon juice and honey is agreeable and useful. For redness and swelling the use of chlorate of potash in solution (eight or ten grains to the ounce) is advisable, either as a gargle, or, if the child be too young, as a wash to be injected into the mouth with the patient sitting up. If there be much swelling, the employment of tannin, either by insufflation as a powder, or in solution as a wash, is beneficial. Ice may also be given with benefit. If the tint be somewhat livid and dusky, tincture of capsicum may be advantageously added to the gargle. This remedy is strongly recommended

internally by some writers on malignant scarlatina. Externally it is well to keep warm-water dressing, a bran poultice, or spongio piline around the throat. If the nose and mouth become clogged, it is important that they be syringed out frequently with warm water, or soap and water, followed by a weak solution of sulphate of copper in a few days, to prevent obstruction to respiration. If the secretion is thin and acrid, lime-water is best. In some cases, where the pulse is soft and frequent, and there is much depression, it is well to give wine from the first; and very often about the fifth day, when the tongue becomes dry, and the pulse becomes weak and falls in frequency, wine will be required if it has been withheld before. The effect of stimulants on the urinary secretion should be carefully noted, and if there be albumen in the urine, and a notable reduction in the quantity of urinary solids, they must be withheld. When there is much swelling of the neck coming on after the first week of the fever, stimulants are, I believe, indicated, and poultices should be applied externally. No good has been derived in these cases from the use of leeches. If matter forms early, lancing is desirable. For albuminuria or hæmaturia, with or without dropsy at the commencement, the great indication is to obtain a free action of the skin. This may be generally secured by small doses of antimonial wine with liquor ammoniæ acetatis, and the employment of the hot-air bath every night. It is well, too, to act on the bowels every second or third day by the use of compound jalap powder. Diluents, such as barley-water, toast-and-water, should be freely given. If there be much fever, and a tolerably firm pulse at the onset of the renal symptoms, cupping to the loins will probably be of service, and in any case dry cupping will do good. As the fever subsides, if the urine be tolerably abundant and of good specific gravity, but still contain albumen, the use of benzoate of ammonia, in five grain doses, seems to be of use; or if this fail, the tincture of the sesquichloride of iron will generally be of use. Sometimes it will be necessary to suspend these remedies, owing to an increase in the albumen and a smoky color of the water with a scantiness in amount, and to return to the hot-air baths and diaphoretics. The only diuretics besides benzoic acid that are allowable in this affection are, I believe, diluent drinks and digitalis, which appear to be of service when the pulse is quick and heat of skin considerable. Never rest satisfied or think your patient out of danger so long as albumen or still more blood remains in the urine; at

any time while this lasts, one of the secondary inflammations or convulsions may set in, and rapidly carry him off.

If convulsions occur, and the patient be not previously very anæmic, bloodletting must be resorted to once and to a good quantity. This may be followed up by dry-cupping to the loins, hot-air baths, and compound jalap powder or elaterium. Trousseau recommends large blisters to the legs; most English authors forbid blistering in any shape, from the fear that cantharides will act injuriously on the already impaired kidneys. They have been so frequently used beneficially, that this theoretical objection to their employment need not, I think, have much weight. I am not aware that their use has ever been followed by increase of the renal symptoms.

If pleurisy set in, or pneumonia, I advise cupping, with or without the knives, according to the force of the pulse; and the subsequent cautious employment of calomel in small frequently-repeated doses. Here, again, I run counter to a commonly-received doctrine that calomel should not be given in albuminuria; my experience, however, inclines me to believe that in the early periods of nephritis, before renal degeneration has much advanced, there is no risk, but positive benefit from its use. If there be much restlessness or distress, the calomel should be combined with Dover's powder. At the same time liq. ammoniæ acetatis and, if the pulse be firm, small doses of antimonial wine may be given. In peritonitis, I believe that opium, with very small doses of mercury, is the sheet anchor. In one very severe case, in which a lady had scarlatina immediately after parturition, followed by peritonitis, the recovery appeared to be entirely due to the use of opium in full doses, combined with small doses of gray powder, until the gums were slightly affected.—*Medical Times and Gazette.*

THE CHLORINE AND MILK TREATMENT OF

SCARLET FEVER AND THE TYPHOID FEVERS.

By CONWAY T. EDWARDS, M. R. C. S. E.

The symptoms, development, and progress of scarlet fever and fevers of the typhoid type, have been so continually brought under public notice, and so ably treated in every

work on the practice of medicine, that it were superfluous to enter upon a consideration of them in this paper, and would not assist in any way the object I have in view, which is, to point out the beneficial influences which a chlorine and chloroform treatment, with a full diet of milk, exercise over these diseases.

It must not be understood that, in advancing these remedies to so prominent a position in the foreground, they are to be regarded in the light of specifics, or as interfering with the anti-phlogistic treatment and regimen which the medical practitioner finds it necessary to adopt during the first stages of febrile disease; but, as possessing the important quality in themselves of at once destroying the putrid effluvia generated by, and thrown off from, the secreting surfaces of the stomach, alimentary canal, kidneys, lungs, and skin, and endowing the system with power to bear the progress of the disease. These effluvia, so poisonous in themselves, on account of the large proportion of sulphurretted hydrogen which they contain, contaminate the air of the sick chamber, oppress nurses and attendants, and are most injurious to the patient. How important, then, must it be to remove them! This chlorine effects: its influence is no question of lengthened time; it commences at once, and continues during the whole course of its exhibition.

Now, as regards "a full diet of milk." From the very commencement of a fever, there is a very great loathing to all kinds of nourishment; the bare suggestion of food creates a shudder, which expresses, more than words can do, how repugnant the idea is to the feelings.

Adopt the once received and re-entertained Brunonian system; give *ab initio* nourishment and tonic medicines, and as the disease advances, with increase of weakness, and ever progressing waste of the solids and fluids of the body, perhaps the real nature of the attack may be suddenly developed and resist every remedial means to overcome it. In no disease is the truth of this more apparent than in typhoid pneumonia. Take a false view of the real nature of the attack; see in the fever everything save the current of inflammation which runs beneath it; suddenly the real truth will be developed, and the engorgement of the lungs is but the precursor of the fatal termination which will rapidly ensue. All antiphlogistic treatment would be useless; calomel and opium and antimony have no time to act, and the patient dies.

But the hourly increasing weakness and waste of the system

are very formidable symptoms during the course of fever: are these to be ignored, and no attempt be made to meet them? Had we but a life-sustaining diet, simple in itself, and not only agreeable to the patient, but eagerly accepted by him—a diet which in itself should contain meat and drink of the most unstimulating nature—how great a boon it would be to the sufferer!

What writes Dr. Thielman, the Russian physician, in his treatise on Fevers? "He had never seen delirium occur during the progress of *any* fever, under the influence of a full diet of milk, as *after broth!* It is not only well borne, but is easily assimilated, and endues the system with *power to resist* disease." This is exactly what is wanted. How does it agree with our own experience? Yet without going quite so far, if it only remained on the stomach with ease; relieved the thirst; sustained the nervous energy, thereby giving power to resist the disease,—important results would accrue from it.

It were needless here to enter upon the analysis of milk, or to show forth the reasons why it is the most life-sustaining of nourishments.

It is objected that milk is indigestible, and therefore not fitted for a weak stomach; that the gastric secretion (analogous to the rennet of the calf) at once separates the solid from the fluid part, the former coming away especially in children, untouched by the digestive organs. The theory looks well upon paper, but will not bear the test of experience. Curd itself is eaten with pleasure and impunity, not only in the delicious junket, as made to such perfection in Cornwall and Devonshire, but in the more homely form of closely-compressed curd, floating in its whey. Few beverages are more grateful to the palate, more refreshing, and more thirst-allaying than whey: it is the pleasantest and most cooling of summer drinks, and its effects are much more permanent than even water itself.

In giving milk to the fevered system, you have at once this most refreshing fluid generated in the stomach, and an unirritating solid formed, which in a greater or lesser degree repairs the waste of the living substance. The gastric juice converts the milk into what is popularly termed "curd and whey."

Now, as to the growth-giving and other nourishing qualities of milk, daily experience proves and shows, in the firm and excellently-tinted skin of healthy infants entirely brought up for seven or eight months upon milk, its potent and genial influence. The mother, being in good health, supplies a

nourishment which no science can equal and no art compound. It is nourishment particularly free from all irritating, clogging, and fever making principle. It is so curiously and wonderfully compounded, that up to a certain point the infant retains it; but beyond that it is rejected, sometimes from over-repletion, on account of its excellent nature, and sometimes from the eagerness with which it is taken.

In treating of milk as a diet especially for invalids, it must be understood that healthy, unadulterated milk is alluded to. This of course is very difficult to be obtained in large towns; almost impossible in the metropolis. In very circumscribed spots, in the latter, are assemblages of stalls, capable of holding several hundreds of cows. The impure condition of the heated air is patent to all. It cannot be other than unwholesome. Seldom do the animals scent the fresh air, feel the sunshine, tread the green grass, or take any exercise! Their daily life is spent in eating the most milk-giving, and of course heat-producing, food. In summer, perhaps, long grass, vetches, pea-halms, (cut and collected, it may be, for a day or two before use,) are given. In very limited space do they wear away their life in producing milk. The consequences need not be dilated on. The animals are mostly in a fevered state, many are directly diseased, and all produce a milk which (without inquiring too curiously into its composition when retailed to the public) is not healthy. This is not the milk to be selected for a fevered patient, and yet, boiled, it is preferable to a farinaceous or animal soup diet.

We will now turn to the bearing of what has been advanced on scarlet and other fevers.

About the year 1844, scarlet fever raged with some violence in the district where I had practised for many years. At an early period of the attack, typhoid symptoms developed themselves. The dryness of the tongue and fauces, the dark secretion on the gums, putrescent fetor of the breath and from the skin, renal and alvine secretions, attested the dangerous nature of the disease. In Bath, a very extraordinary symptom frequently developed itself, and seemed to be the sure precursor of death. This was a rigidity of the sterno-cleido-mastoidei muscles, of a nature so great that they felt like rolls of wood beneath the touch; the smaller muscles soon put on the same action, and the sufferer seemed in dying to be strangled. In the country district this formidable complication did not occur; but one family, fearful that an only daughter might take the

disease, left for Clifton. Before six weeks had elapsed, this child was seized with the complaint, and died.

In the early days of the epidemic, several fatal cases occurred in my practice, and something akin to a feeling of regret came over me when summoned to any new case. But an accident opened up a mode of treatment, which soon changed the fatal tendency of the attack. Two children, living at the National School, Bathford, took the complaint. They were relatives of one of the nurses at the Bath Hospital, and she came over to nurse them. The symptoms in one child were urgent from the beginning, and both head and chest suffered severely: the throat was studded with sloughing spots, and greatly swollen; the breath and all the secretions gave out the putrefactive fetor. The cases seemed to be of the worse kind. About the fifth day the nurse said: "She has been better, Sir, since she used that last gargle; the great restlessness is gone, the rambling talk has ceased, and all putrid smell from the breath and evacuations has left. I believe," she continued, "it was the gargle which did it, for she swallowed the first dose." This gargle was composed of a solution of the chloride of lime, alum, astum, compound tincture of iodine, water, and a little tincture of capsicum.

On examining the throat, I found the nurse's statement to be correct as to the breath; and not only had this beneficial change taken place, but the sloughing surfaces were assuming a brighter red, the sloughs were evidently contracting or curling up, and the tongue and gums were becoming moist. There was also a quietude about the look and features, which indicated that the nervous irritability was passing away. The nurse was so positive as to the cause of this favorable change, that she was directed to add a drachm of the solution of the chloride of lime to two pints of tepid water, with a little lemon-juice and sugar, and give it as a diet-drink to the patient. This, with a gruel and sago diet, and ammoniated effervescent mixture, and an occasional dose of rhubarb and grey-powder and James's powder, were given, until it was safe to administer tonics and good diet. The disease spreading, the same diet-drink was adopted, and the use of chlorine extended by directing the body to be sponged with tepid water containing it, twice a day. After the adoption of this treatment no fatal case occurred.

At the termination of the epidemic I read a paper on the subject before the Bath and Bristol branch of the British Medical Association, being justified in so doing from the

numerous cases which terminated successfully. One or two of the members expressed themselves dubious respecting the effects produced by such means, when the physician who had permitted the nurse to attend on her relatives rose and said that "he could vouch for the accuracy of the writer's statements, for his nurse had narrated to him the results of the treatment." This paper I subsequently published. A week after its publication I was agreeably surprised at receiving a polite note from Mr. Martin Ricketts, of Droitwich, (a total stranger to me,) stating that he had perused the paper with great interest and pleasure; that he could confirm all that I had written on the subject of the good effects of chlorine in scarlet fever; and that, strange to relate, a similar accident to a child using a chlorine gargle had led to the adoption of chlorine in his practice; lately, however, he had used a preparation made by the Apothecaries' Company at Liverpool, and termed *chloriform*, which appeared to him to possess all the antiseptic powers of chlorine, with a sedative influence peculiarly its own. The dose was from five to thirty minims. He requested my acceptance of a small quantity, regretting at the same time that it was so expensive." In this preparation lay hidden a grand secret—a glorious gem, sparkling, and beckoning to any scientific mind to free it from its prison-house. Its advances were unheeded, until Dr. Simpson first recognized in its component parts something which possessed all the anæsthetic properties of that fluid without its nauseous ones. What is its position now? It is first on the list of alleviators of human suffering; and the discovery of it should have won for its discoverer a world-wide testimonial. I soon recognized the preparation, made public towards the termination of 1844, to be the same as that sent me by Mr. Ricketts; and, like other medical men, freely experimentalized with it on animals, insects, etc., and then on our suffering fellow-creatures.

On the rebreaking out of scarlet fever and typhoid epidemic of the usual form, I prescribed chloroform; but as it did not remove the effluvia so effectually as chlorine I administered the latter in combination with it. It was, however, observed that after every dose of chloroform a great calmness and inclination to sleep were produced, unattended with any adverse cerebral symptoms.

The beneficial effects which the use of these remedial means produced in scarlet fever, likewise resulted from their exhibition in typhoid fever; so that I had every reason to be satisfied with the treatment.

But the power of preparations containing chlorine over infectious fevers was known long before the disinfectant principle was discovered to exist in that gas. The celebrated Dr. Parry, of Bath, was an advocate for the use of muriatic acid, both externally and internally, in fevers; but the beneficial influence of that medicine was not referred to the chlorine it contained. That acid is now termed hydrochloric, from its chemical constituents; and in the present day when the chlorate of potass is freely used in malignant fevers, sore throats, etc., is not frequently you find it acknowledged that to the liberated chlorine are the good results attributed. Read any book on fevers, from the school-book of the day to the popular *brochure* of the minute, and see what little stress is laid on the value of chlorine as an important curative agent.

Since my residence in London, numerous cases of scarlet fever have come under my care; and, with every disadvantage, in many instances, of impure air, small, ill-ventilated rooms, indifferent diet and nursing, two cases only terminated fatally, and these were seen some days after the disease had first appeared.

It must not be imagined from what has been advanced that these fevers were treated solely with chlorine, chloroform, and milk. The antiphlogistic system was invariably practised at the commencement of the attack, involving sometimes abstraction of blood, counter-irritation, chloride of mercury, potassio-tartrate of antimony, and purgatives, with gargles of capsicum, alum, iodine, and chloride of lime solution. It is after the first two or three days of this treatment that the internal and external use of chlorine and chloroform is so beneficial, and the milk diet can be depended on—or, if the stomach can bear it, gruel made thick as good cream, with two thirds milk; and when we consider what a state of irritation the mucous lining of the primæ viæ must be in, and how certain glandular structures are affected in all typhoid fevers, such a diet cannot but prove most soothing. In conjunction with these, sponging the body twice a day with tepid chlorinated water, change of linen and of bed (where two beds can be placed in the room), will contribute greatly to the general welfare and convalescence of the patient; whilst wine, ale, soups, and jellies can be deferred until the termination of the complaint approaches, or urgent symptoms demand them.

I have now brought my observations to a conclusion, with the hope that some other practitioner may be induced to publish his experience of chlorine and chloroform in fevers.—*London Lancet.*

EDITORIAL AND MISCELLANEOUS.

A First Rate Notice.—The attention of subscribers in arrears for the JOURNAL, is directed to the *billet doux* which Dr. E. Ingals encloses to each. The large advance in prices renders the littles now necessary. "Mony a little makes a muckle" is a homely but excessively true Scoth proverb, and we trust each delinquent will bear in mind. All good bank notes received, and genuine Treasury notes not refused. Don't forget the address:

DR. E. INGALS,
Box 14, CHICAGO, ILL.

About Fees.—Everything else has gone up—flour and meat, groceries and dry goods. Tradesmen and journeymen, artists and day laborers all have struck for and received higher pay. That is, paper has gone down (when stamped with the representative of money impress) and gold is invisible. Things threaten to become worse before they are better—the latter pangs are yet to come—perhaps "as in the curing of a strong disease, even in the instant of repair and health the fit is strongest;" nevertheless that happy instant has not yet come, and it becomes the physician to imitate "the rest of mankind," and give another turn to the crank of prices. What, with license fees, and income tax, and tax on about every conceivable thing one uses, with extra taxes clapped on every time it is used in a little different way, we shall have to quit living unless there is union and reform in this respect. One-third at least must be added.

In this city, where prices average say forty per cent. of the Society's scale, a general co-operation might perhaps lift them within telescopic distance of the fee-bill. This city is demoralized by the unscrupulous underbidding of men whose

position, at least, ought to lift them above such despicable expedients to secure and keep practice.

But in most places this evil is not present. We call, therefore, upon all respectable physicians, who rely upon their real knowledge and ability for success and not in selling themselves to the lowest bidder, to take hold of this matter in justice, not only to themselves, but to the profession at large. A little common sense, union and harmony, for the nonce at least, is all that is necessary to secure the result. No single practitioner of gentlemanly instincts wishes to victimize himself alone for the benefit of low-lived rivals.

Variola—Its Nature and Treatment. A Monograph by Andrew Nebinger, M. D., Philadslphia.—In this well written pamphlet the author urges what he denominates the "compensative nutritive" treatment of variola. It is an able plea in favor of what we have always believed the appropriate treatment of small-pox. He shows that it is not the inflammation which is to be feared, but exhaustion, to be met promptly by tonics, stimulants, and, especially, *nutritious diet.* We extract:

My practice has been in all cases of small-pox, during the initiatory or febrile and papular stages of the disease, to prescribe an antiphlogistic, medicinal, and dietetic treatment; but to abandon this form of treatment as soon as the papules begin to take upon themselves the vesicular form, and then commence a treatment which, in all its essentials shall be supporting.

In carrying out this treatment, I have not found any diet so useful, so grateful to the patient, or any which gave as little inconvenience to swallow when the mouth, fauces, and throat were studded with pustules, as a combination of eggs, milk, sugar, and ice, made in the proportion of one egg well beaten—half a pint of milk, sugar and ice in quantities suited to the taste and desire of the patient. When the necessity for stimuli has existed, as it does in all cases of the confluent variety of smallpox, I have added brandy, or what I think better, Monongahela whiskey, because for purity it can be

more safely relied on, and can more readily be obtained. The quantity of this diet which I direct the patient to use in confluent smallpox is half a pint, or a tumblerful, with a large tablespoonful, or half an ounce, of Monongahela whiskey added to it, every two hours or every hour and a half *during the day and night.* I have frequently had patients to take as many as twelve eggs, three quarts of new milk, and eight ounces of whiskey daily for several consecutive days—and yet, with all this supporting and stimulating diet, this most excellent proteine or highly nitrogenized food, these poor fellows barely escaped sinking into the grave, some of them having had (notwithstanding they were so vigorously supported with food, and so actively stimulated) that peculiar feebleness and tremor which is always the unmistakable evidence of a breaking up of the vital forces—the threatenings of dissolution.

He does not, however, confine his patients to the eggs and milk, but permits use of meats and poultry; in short, any food abounding in proteine elements—urging "that in such cases to eat is to live, to abstain is to die." The blood vessels must be supplied with material to enable a vigorous and rapid maturation of the pustules and all the offices of vitality.

Although this is in entire opposition to the dicta of Wood, Watson, Gregory, West, and other standard authorities, there can at the present time, be no doubt of its physiological and practical correctness. The so-called secondary fever is not to be broken down, but sustained. It is more analogous to hectic or typhoid than to the inflammatory.

In passing, we cannot forbear to say that, precisely the same principles are applicable in the treatment of all the phlegmasiæ.

Causes and Cure of Diseases of the Feet: with Practical Suggestions as to their Clothing. By C. H. Cleaveland, M. D., Cincinnati, 1862. The author, in this pamphlet, has given a very fair *resume* of the more common affections of the feet with judicious practical directions. The closing chapter, on the proper construction of shoes, is a very practical one at

the present time, and we commend it especially to those whose duty it is to provide the "grand army" with *understandings.* The book is rather for popular than professional reading, but contains much valuable information.

Annual Announcement of the University of the Pacific, with the Valedictory Address of Prof. Henry Gibbons, M. D. —We judge that Prof. G. scarcely claims to be a *progressive* in medicine, nevertheless he has afforded a very readable discourse. His doctrines find but few adherents in these degenerate times.

Advance Sheets.—We acknowledge with thanks receipt of advance sheets containing several very excellent monographs read before the N. Y. Academy of Medicine:

Isaac E. Taylor, M. D., on *Non-Shortening of the Cervix Uteri.*

J. Marion Sims, M. D., on *Vaginissums.*

A. K. Gardner, M. D., on *Amputation of the Cervix Uteri.*

Alonzo Clark, M. D., on *Albuminuria.*

B. Fordyce Barker, M. D., on *Peloic Hæmatocele.*

M. H. Ranney, M. D., on *Epilepsy.*

E. Noeggerath, M. D., on *Inversion of the Uterus.*

Comments and extracts may be given hereafter.

A Good Omen.—It is stated that Surgeon General Hammond has cut down the regulation supply of medicines to the army *fifty per cent.* The amount thus saved is appropriated to the increase of Hospital stores, including especially more nutritious diet.

Under the energetic direction of this sagacious officer the Medical Staff of the Army is becoming wonderfully enhanced in efficiency. Abuses are rectified as soon as discovered, improvements constantly made and the range of usefulness extended even though the Gordian knot of red tape have to be severed by often repeated strokes of his trenchant official catlin.

Physical Labor in Insanity.—At the annual meeting of the Association of Superintendents of Insane Asylums in the U. S., it was pretty generally agreed that those patients among the males who were engaged in outdoor labor, and those among the females who employed themselves indoors were always the most likely to be cured and go home.

The pecuniary value of the labor performed does not prove very considerable, but as a remedial agent it is of very great importance, as Dr. Gray remarked, "beneficial to the patient in promoting his comfort, facilitating his recovery, and producing quiet and order throughout the house." Great care is requisite that they do not work beyond their strength or until very weary.

Practical disadvantages sometimes ensue, owing mainly to the interference of friends and others who think if the patients work they ought not to pay for their board or treatment.

The idea is coming up everywhere, that those agencies which promote digestion and the formation of *good blood* with which to bathe diseased parts *from within, are the best curatives in all diseases.*

Cause of Parturition at a fixed Period.—A reviewer in the Sept. No. of the *Am. Med. Monthly*, commenting at some length on Prof. Bedford's Treatise on Obstetrics, refers particularly to the Author's explanation of the reason why parturition occurs at the close of a fixed period, and endorses it by the following remark: "We, therefore, now unreservedly agree with the reported judgment of one, himself a *Magnate* in physiology," [We suppose Prof. Paine is here intended, termed a '*Magnate*' from the size of his books.—Ed.] "that the explanation is *ingenious, plausible and satisfactory;* nay, more—we believe that it will be recognized in the future as the nearest possible approximation to the truth that could have been made at this time."

Prof. Bedford's explanation is certainly an approximation to the truth, better perhaps than Avicenna's "Grace of God"

doctrine—nevertheless, it fails wholly to include cases of spontaneous, or induced, abortion or miscarriage, which should be traced to the same mechanism.

Prof. B. attributes the uterine contraction to "*a matured development of the muscular structure of the organ itself*,"—which accounts for nothing but labor at nine months.

The true doctrine as many years ago (1848) elucidated by the present writer [Allen] and which may be found as published in the *Medical Independent*, Oct., 1857, p. 449, and republished in the *Reese's Medical Gazette*, Nov. 1857, p. 685, and in very many other journals. We extract from that article:

"Why does parturition occur at a fixed period?

"Because the changes in the blood of the mother, occasioned by the full development of the fœtus, produce that particular molecular change in the uterine muscle which necessitates contraction. The molecular change is the cause.

"The same blood-modification may occur from accidental causes, or through the medium of the nervous arc.'

Here it will be seen that all the phenomena are reducible to the same series. Diseases, poisons, mechanical agencies, or full development of the fœtus inducing that particular molecular change which, in all muscular structures, necessitates contraction. The mechanism is identical in all physiological, and indeed pathological, acts of extrusion.

But what puzzles us mainly is, that he of the "Institutes" should pronounce "*ingenious*, *plausible*, *satisfactory*," that which is essentially a doctrine which, in the delectable work alluded to, (§ 349 *d*) he calls upon all intellectual physicians to turn from with "LOATHING AVERSION!"

Surgeon J. V. Z. BLANEY, U. S. Vols., has been ordered to turn over the property in his charge (as Medical Purveyor at Alexandria, Va.) to the Medical Purveyor at Washington, and report for duty to Gen. Viele at Norfolk, Va. Surgeon I. H. RAUCH, U. S. Vols., has been directed to report to Maj. Gen. Banks for duty with General Augers' command.

DIRECTORY OF HOSPITALS.—The attention of clergymen, editors, and others is respectfully requested to the following notice, which is of interest to all who have friends in the army, and which it is therefore desirable should be widely published:

DIRECTORY OF THE HOSPITALS.

The Sanitary Commission have established an office of information in regard to patients in the Hospitals of the District of Columbia, and of Frederick City, Maryland. By a reference to books, which are corrected daily, an answer can, under ordinary circumstances, be given by return mail to the following questions:

1st. Is —— —— [giving name and regiment] at present in the hospitals of the District or of Frederick city?

2nd. If so, what is his proper address?

3rd. What is the name of the Surgeon or Chaplain of the hospital?

4th. If not in hospital at present, has he recently been in hospital?

5th. If so, did he die in hospital, and at what date?

6th. If recently discharged from hospital, was he discharged from service?

7th. If not, what were his orders on leaving?

The Commission is prepared also to furnish more specific information as to the condition of any patient in the District hospitals, within twenty-four hours after a request to do so, from an officer of any of its corresponding societies.

The office of the Directory will be open daily from 8 o'clock a. m. to 8 o'clock p. m., and accessible in urgent cases at any hour of the night.

The number of patients in these hospitals is about 25,000. If found to be practicable, the duty here undertaken locally by the Commission will be extended to include all the general hospitals in the country.

FRED. LAW OLMSTED,
General Secretary.

Adams House, 244 F street,
Washington, D. C., November 19, 1862.

The Physician's Hand-book of Practice for 1863. *By William Elmer, M. D.*—Those who have become accustomed to the convenience of this pocket memorandum would very much miss its annual appearance. Among other things, it contains a classification of diseases, a list of remedial agents, of incompatibles, poisons and their antidotes, a diagnostic examination of the urine, a record of practice and treatment, an obstetric calendar, a general memoranda, &c. It may be obtained from our principal book-dealers, or from the Publisher, W. A. Townsend, New York.

Dentition and its Derangements. A Course of Lectures by A. Jacobi, M. D., Prof. of Infantile Pathology, Therapeutics. New York : Bailliere Bros., 1862.—The large extracts given from this series in our pages precludes the necessity of our recommending this little work to our readers. It is a valuable contribution to the literature of the subject.

Overcrowding of Military Hospitals.—In the French military hospitals 1700 cubic feet of air-space are allowed by regulation to each patient. In this country the minimum is fixey at 1000 cubic feet. And yet of our 150 military hospitals, we venture the assertion that not five per cent. allow 800 cubic feet of air-space to each patient, whatever may be their system of ventilation. In the majority 700 cubic feet is the maximum of air-space to each patient, and from this point hospitals may be instanced representing various figures in the descending scale as low as 250 cubic feet. And this last amount—little better than the famous Black Hole—is the maximum of air-space allowed in hospital buildings originally constructed for barracks, and almost destitute of ventilation. In large numbers of hospitals the beds are arranged at given intervals, without the slightest regard to the cubical area of the wards. The results of overcrowding are apparent in every hospital where it is practised, in the prevalence of low forms of fever, erysipelas, &c—*American Medical Times.*

TWENTIETH

ANNOUNCEMENT

OF

RUSH MEDICAL COLLEGE,

FOR THE

SESSION OF 1862-'63,

WITH

CATALOGUE OF PREVIOUS SESSION.

CHICAGO:
WM. PIGOTT, BOOK AND JOB PRINTER, No. 130 SOUTH CLARK STREET.
1862.

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Office, No. 99 South Clark Street.

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Professor of Physiology and Surgical Pathology.
Office, N. W. corner Lake and Clark Streets.

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Professor of Obstetrics and Diseases of Women and Children.
Office, S. W. corner Clark and Madison Streets.

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Professor of Anatomy.
Office, Calhoun Block, 119 South Clark Street.

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Demonstrator of Anatomy.
Office, No. 45 South Clark Street.

G. J. CLOUD,
Prosector to the Professor of Anatomy.

CHARLES KEIL, JANITOR.

RUSH MEDICAL COLLEGE.

THE twentieth Regular Annual Session of this Institution will commence on Wednesday the first day of October, 1862, and continue sixteen weeks.

The public general Introductory Address will be delivered on Wednesday, at 8 o'clock, p.m., in the College Hall.

In issuing this, the twentieth Annual Announcement, the Trustees feel that they have reason for profound gratitude: *First*—To the Profession, whose appreciation of the enterprise of establishing a Medical School in Chicago, has caused them to give to it their cordial support and active co-operation, and by whose friendship and liberality the School has grown from the experiment of its infancy, into one of the fixed institutions of the land, numbering among its graduates, nearly six hundred of the members of our profession, and having extended the advantages of its instruction to more than two thousand students of medicine. *Second*—To the Faculty, by whose united, harmonious and untiring efforts, the objects for which the School was founded, have been so successfully accomplished. Since the re-organization of the School, nearly four years since, the members of the Faculty have held continuously the respective positions they now severally occupy, and the Institution has thus escaped a misfortune too common to Medical Colleges—that of frequent change of teachers.

Owing to the unsettled condition of public affairs throughout the country during the last year, and the absence in the army of so many medical students, it was supposed that in all our medical schools the classes of 1861-'62 would be unusually small, an antici-

pation, too, that was generally verified by the results. To this rule, however, the Rush Medical College was an exception, as it found convened within its walls during the last session, almost the largest class ever known to its history. These facts, coupled with the present hopeful condition of public affairs, and the unusual demand now experienced in both civil and military life for competent physicians and surgeons, encourage the Faculty to believe that the former prosperity of the school will continue to increase, and that at no distant day it will stand in numbers, as it does in advantages, second to but few in the whole country.

Arrangements are being perfected which will make our clinical advantages superior to those of any former session. The City Hospital is, as formerly, in charge of the Faculty during the session, and the number of patients admitted into its wards continue to increase as the merits of the Hospital become more extensively known. The College Dispensary is attended by more than two thousand patients during the year, and affords to the class a large amount of interesting material for clinical observation.

Cases of labor will be assigned to the care of advanced students if they desire, thus enabling them to familiarize themselves with the physician's duties in the lying-in chamber.

Anatomical material will be supplied cheaply, and in unlimited abundance.

Our Museum is filled with carefully selected illustrations of all kinds necessary for demonstrating every department. Beautiful imported models in *Papier Mache*, illustrating the Anatomical and Obstetric departments, besides various skeletons, models in plaster, drawings and prepared specimens, are among the results of effective labor in these departments. Among the most valued specimens is the extensive osteological collection of Prof. Brainard, selected by himself in Paris, and the great variety of plaster casts with wet and dry preparations, afford every necessary illustration to this most important department.

The Professor of Physiology will, as last year, illustrate his department by vivisections, which have proved so essential to successful researches in this interesting branch.

The department of Materia Medica is supplied with every necessary means of illustration.

It will be noticed we have omitted the Preliminary Course, in this particular conforming to the general custom of other schools.

It is earnestly hoped, as there will be no Preliminary Course, that the first day of the Session will find the entire class in attendance, as in case of failure they lose many elementary facts of essential value in the progress of the Course.

Students upon arriving in the city may call on the Secretary, at his office, 119 South Clark Street, or any member of the Faculty, who will give them any needed information as to board, books, lectures, rooms, etc. Any one desiring information by letter, will please address the Secretary, Dr. R. L. Rea, Box 533.

Cards containing daily order of Lectures, Clinics, etc., will be distributed on the first day of the session.

TEXT BOOKS, Etc.

Students will find a good assortment of medical books and surgical instruments in this city. It is recommended that they provide themselves with one or more text books in each of the departments. The following, among others, are recommended:

Anatomy.—Gray, Wilson.
Physiology.—Dalton, Draper, Carpenter.
Materia Medica.—Stille, Wood, U. S. Dispensatory.
Chemistry.—Fowne, Stockhardt.
Obstetrics.—Bedford, Churchill.
Surgery.—Erichsen, Chelius.
Practice of Medicine.—Wood, Watson, Bennett's Clin. Med.
Surgical Anatomy.—Maclise.
Microscopic Anatomy.—Todd and Bowman, Queckett.
Surgical Pathology.—Paget.

REQUIREMENTS FOR GRADUATION.

The following are the requirements for the degree of Doctor of Medicine, viz:

1st. The candidate must be twenty-one years of age, and give satisfactory evidence of possessing a good moral character.

2nd. He must have pursued the study of medicine three years, and have attended at least two courses of Lectures, one of which must have been in this Institution. Four years of regular and continued practice will be considered equivalent to one course of lectures.

3rd. He must have attended Clinical Instruction during, at least, one college term.

4th. He must have been engaged in at least one course of Practical Anatomy.

5th. He must notify the Secretary of the Faculty of his intention to become a candidate, and deliver to him, two weeks before the close of the session, a thesis on some medical subject, written by himself, and at the same time deposit the graduation fee, which, together with the thesis, will be returned to him in case of withdrawal or rejection.

6th. Every candidate must undergo a full and satisfactory examination on all branches taught in the College.

7th. Graduates of other respectable schools of medicine will be entitled to an *ad eundem* degree, by passing a satisfactory examination, paying the graduation fee, and giving evidence of a good *moral and professional* character.

INTERMEDIATE COURSE OF INSTRUCTION.

The Spring and Summer Course of Instruction, conducted by an association of professional gentlemen connected with the college, will commence soon after the close of the Annual Session, and continue from twelve to sixteen weeks. There will be, as heretofore, from two to four lectures daily. Students will have an opportunity of participating in the clinical advantages of the College and Hospital .

The usual announcement of this course will be given at an early period in the ensuing regular session.

FEES.

Lecture Fees, for the Course,	$40 00
Matriculation Fee, (paid but once,)	5 00
Dissecting Ticket,	5 00
Hospital Ticket,	5 00
Graduation Fee,	20 00

The Alumni of this, and the graduates of other respectable colleges, will be permitted to attend the whole or any part of the courses of lectures, by calling on the Secretary and procuring the Matriculation ticket.

BOARD AND ROOMS.

Good board, with rooms and all the usual accommodations, can be obtained in this city at from $2.00 to $3.50 per week. By associating in clubs, students have, during previous sessions, been enabled to supply themselves with excellent accommodations at a material reduction even from these rates.

CATALOGUE OF STUDENTS.

NAMES.	RESIDENCE.
Charles E. Allen	*Illinois.*
Albert A. Ames	*Minnesota.*
G. Andrews	*Wisconsin.*
L. M. Andrews	*Illinois.*
John B. Annis	"
Stephen G. Armstrong	*Indiana.*
William R. Avery	"
William C. Brown	*Ohio.*
W. H. Babbit	*Illinois.*
C. F. Barnett	*Kentucky.*
A. T. Bartlett	*Illinois.*
G. F. Beasley	*Indiana.*
G. W. Beggs	*Illinois.*
L. L. Bennett	"
E. Bishop	*Wisconsin.*
E. L. Bliss	*Illinois.*
H. S. Blood, M.D	"
N. Blood	*Indiana.*
E. W. Boyles	*Illinois.*
W. H. Bright	*Indiana.*
James Brown	*Illinois.*
Luther Brown, Jr	*Wisconsin.*
Fred. W. Byers	*Illinois.*
Spencer Byrn	*Indiana.*

NAMES.	RESIDENCE.
George W. Burns	*Illinois.*
W. D. Carter	"
George J. Cloud	"
J. G. Conley	*Wisconsin.*
James Cunningham	*Illinois.*
W. L. Cuthbert	"
Thomas G. Drake	*Indiana.*
A. W. Darter	*Illinois.*
William B. Dunkle	"
Samuel M. Dunn	*Iowa.*
George N. Early	*Illinois.*
Frank A. Emmons	"
J. B. Eversole	"
B. F. Ewers	*Ohio.*
George N. Fish	"
John B. Fares	*Illinois.*
J. B. Farrington	*Tennessee.*
S. A. Ferrin	*Wisconsin.*
Stephen N. Fish	*Illinois.*
O. D. Ford	*Michigan.*
S. Foster	*Illinois.*
William A. Garrett	*Indiana.*
R. R. Gaskill	*Wisconsin.*
J. D. Gray, M.D.	*Indiana.*
William M. Gregory	*Illinois.*
J. W. Groesbeck, Jr.	"
Evert S. Higgins	"
Horace H. Hardinge	"
J. M. Hagey	"
R. B. Hayden	*Michigan.*
J. H. Hauser	*Indiana.*
J. B. Hazel	*Illinois.*
J. Milton Hiatt	*Ohio.*
F. M. Hiett	*Indiana.*

NAMES.	RESIDENCE.
Morris Hoblit	*Iowa.*
H. C. Hollingsworth	*Illinois.*
M. Hopkins	"
A. Z. Huggins	*Iowa.*
H. J. Isom	*Ohio.*
Chester Keeder	*Illinois.*
T. A. Kingston	"
George A. Lamb	*Wisconsin.*
J. M. Lanning	*Iowa.*
C. E. Loomis	*Illinois.*
John E. Lynk	"
E. E. Lynn	"
George Mason	"
J. D. McCleary	*Iowa.*
George McFarland	*Illinois.*
A. G. McGrew	*Iowa.*
J. Seymour Morris, M.D.	*Indiana.*
William McKnight	*Illinois.*
J. H. McNeel	*Wisconsin.*
W. Meacher, Jr.	"
Frank C. Mehler	*Illinois.*
F. R. Millard	*Wisconsin.*
George J. Monroe	*Illinois.*
T. J. Montgomery	*Indiana.*
R. Morris, M.D.	*Illinois.*
W. C. Morrison, M.D.	*Ohio.*
Malcom Nichols, M.D.	*Michigan.*
Elmer Nichols	*Illinois.*
J. Copp Noyes	"
Cornelius O'Brien	*Wisconsin.*
Norman Owen	*Iowa.*
Norman K. Piper	*Indiana.*
Erastus Preston	*Wisconsin.*
W. R. Patton	*Illinois.*

NAMES.	RESIDENCE.
W. C. Piatt	*Indiana.*
E. H. Price	*Illinois.*
C. M. Richmond	*Indiana.*
H. W. Richardson	*Illinois.*
John Robbins	"
F. C. Robinson	"
L. H. Rogers	"
W. R. Russell	*Wisconsin.*
Rawson C. Ransom	*Indiana.*
Sylvester E. Ross	*Minnesota.*
Ezra C. Sherman	*Canada West.*
John W. Sapp	*Illinois.*
John W. Saucerman	*Wisconsin.*
Samuel R. Seawright, M.D.	*Indiana.*
James K. Secord	*Ohio.*
S. H. Skaggs	*Virginia.*
H. W. Sigworth	*Illinois.*
Asbury E. Smith	*Wisconsin.*
D. C. Smith	*Illinois.*
W. Smith	"
L. de Steiguer	"
Robert E. Stevenson	"
S. B. Ten Broeck	"
P. R. Thombs	*Iowa.*
J. Forrest Todd	*Illinois.*
W. H. Tompkins	"
I. A. Torrey	*Wisconsin.*
B. Rush Torrey	"
Claudius Underwood	*Kentucky.*
H. Vanmeter, M.D.	*Illinois.*
Thomas H. Walker, M.D.	"
J. A. Ward	"
Nelson Ward	*Indiana.*
Alfred Waterman, M.D.	*Illinois.*

NAMES.	RESIDENCE.
J M. West	*Illinois.*
Alfred H. Whipple	*Wisconsin.*
E. H. Winston	"
O. S. Wood	*Illinois.*
Roland Woodward	"
D. B. Wren	*Ohio.*
J. H. Wagner	*Michigan.*
John Zahn	*Illinois.*

STATES.

Illinois	67
Wisconsin	19
Indiana	19
Iowa	8
Ohio	7
Michigan	9
Kentucky	2
Minnesota	2
Tennessee	1
Virginia	1
Canada West	1
TOTAL	134

LIST OF GRADUATES

ON FEBRUARY 5TH, 1862.

NAMES.	RESIDENCE.
Albert A. Ames	*Minnesota.*
Charles E. Allen	*Illinois.*
Stephen G. Armstrong	*Indiana.*
George W. Beggs	*Illinois.*
Aurelius T. Bartlett	"
Leonard L. Bennett	"
James Brown	"
Elijah W. Boyles	"
William L. Cuthbert	"
J. Griffin Conley	*Wisconsin.*
William D. Carter	*Illinois.*
Samuel M. Dunn	*Iowa.*
Thomas G. Drake	*Indiana.*
James B. Farrington	*Tennessee.*
A. Z. Huggins	*Iowa.*
Jacob H. Houser	*Indiana.*
Riley B. Hayden	*Michigan.*
Jacob M. Hagey	*Illinois.*
Clark E. Loomis	"
J. Meek Lanning	*Iowa.*
George L. Monroe	*Illinois.*
William Meacher	*Wisconsin.*
William McKnight	*Illinois.*
Fordyce R. Millard	*Wisconsin.*
William Rush Patton	*Illinois.*
Holland W. Richardson	"

NAMES.	RESIDENCE.
William R. Russell	*Wisconsin.*
Charles M. Richmond	*Indiana.*
Robert E. Stevenson	*Illinois.*
Samuel B. Ten Broeck	"
J. Allen Torrey	*Wisconsin.*
Alfred H. Whipple	"
D. Bishop Wren	*Ohio.*
John A. Ward	*Illinois.*
Egbert H. Winston	*Wisconsin.*

WHOLE NUMBER OF STUDENTS AND GRADUATES.

The following Table shows the whole number of Students and Graduates who have attended the Rush Medical College since its organization, in 1843, viz:

1st	Course,	- 1843–44,	-	Students	22,	-	Graduates,	1
2d	do	- 1844–45,	-	do	46,	-	do	11
3d	do	- 1845–46,	-	do	50,	-	do	10
4th	do	- 1846–47,	-	do	70,	-	do	16
5th	do	- 1847–48,	-	do	140,	-	do	33
6th	do	- 1848–49,	-	do	100,	-	do	19
7th	do	- 1849–50,	-	do	104,	-	do	42
8th	do	- 1850–51,	-	do	126,	-	do	44
9th	do	- 1851–52,	-	do	105,	-	do	30
10th	do	- 1852–53,	-	do	108,	-	do	34
11th	do	- 1853–54,	-	do	122,	-	do	37
12th	do	- 1854–55,	-	do	116,	-	do	41
13th	do	- 1855–56,	-	do	150,	-	do	42
14th	do	- 1856–57,	-	do	116,	-	do	41
15th	do	- 1857–58,	-	do	100,	-	do	36
16th	do	- 1858–59,	-	do	117,	-	do	32
17th	do	- 1859–60,	-	do	119,	-	do	36
18th	do	- 1860–61,	-	do	160,	-	do	36
19th	do	- 1861–62,	-	do	134,	-	do	35
					2004			576